

FrelTec

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82319 Starnberg
Germany

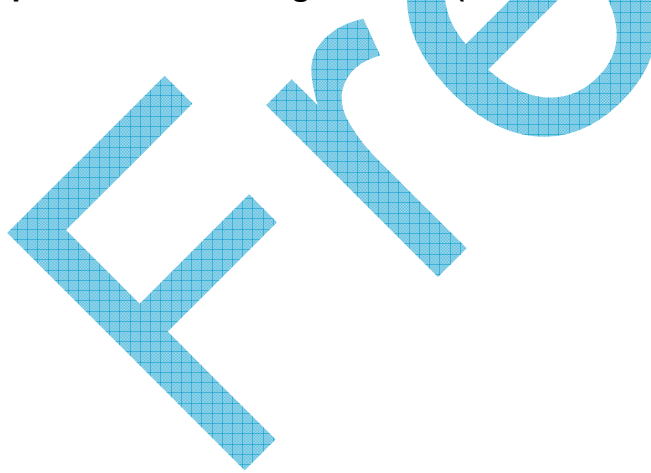
Silicon Carbide Schottky Diode
T0-220AC

TO-220AC

SPECIFICATION

6JB	065*	B*	165*	03*	S*	T220	Y0F
Type	VR	FC	VF	IR	NC	Package	Packing
6JB: Silicon Carbide Schottky Diode	065: 650V	2: 2A	165: 1,65V	03: 30uA	S: Single chip	TO-220AC	Y0F: pack in Tube for 50 pc
	120: 1200V	4: 4A	170: 1,70V	05: 50uA	C: Dual chip		
		5: 5A	175: 1,75V	10: 100uA			
		6: 6A		20: 200uA			
		8: 8A					
		A: 10A					
		B: 15A					
		C: 20A					

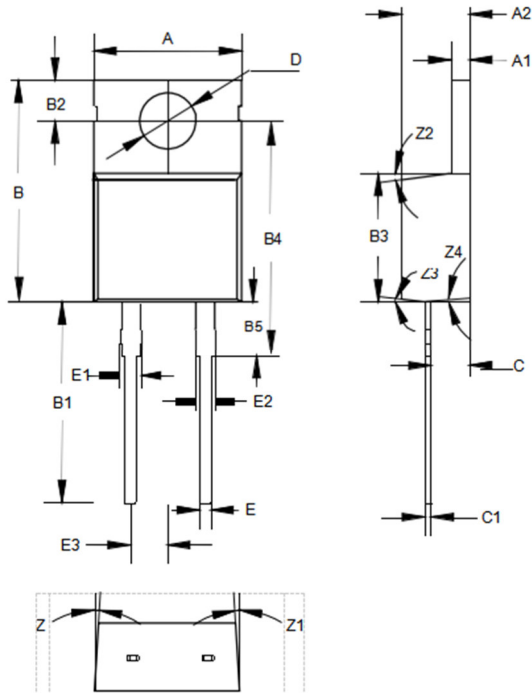
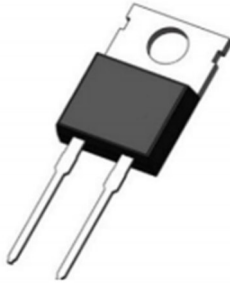
All products according to RoHS (2015/863/EU)



TO-220AC

FrelTec Silicon Carbide Schottky Diode

PACKAGE OUTLINE



TO-220AC								
	Min.	Nom.	Max.		Min.	Nom.	Max.	
A	9.8	10	10.2	D	3.7	3.8	3.9	
A1	1.17	1.27	1.37	E	0.68	0.78	0.88	
A2	4.5	4.6	4.7	E1	1.2	1.4	1.6	
B	14.5	15	15.5	E2	1.17	1.27	1.37	
B1	13.2	13.7	14.2	E3	2.44	2.54	2.64	
B2	2.65	2.75	2.85	Z		3°		
B3	8.5	8.7	8.9	Z1		3°		
B4	15.5	16	16.5	Z2		7°		
B5	3.4	3.7	4.0	Z3		7°		
C	2.3	2.6	2.9	Z4		15°		
C1	0.28	0.38	0.48					

TO-220AC

Silicon Carbide Schottky Diode

Order code	Maximum Ratings & Electrical Characteristics (TA=25°C unless otherwise noted)								Electrical Specifications (TA=25°C unless otherwise noted)						Thermal Mechanical Specifications (TA=25°C unless otherwise noted)		
	V _{RRM}	V _{DRM}	VDC	IF(AV) @ TC			IFS M@ tp=10ms	Ptot @ TC		VF Note1		IR @ TJ=25°C Note2		Qc @ TJ=25°C		C @ TJ=25°C, f=1MHz	RθJC (°C/W)
				25°C	125°C	153°C		25°C	110°C	Typ	Max	Typ	Max	Typ		Typ	Typ
6JB0654 16503ST 220Y0F	650V	650V	650V	13A	6A	4A	34A	51W	22W	1,40V	1,65V	2uA	30uA	11nC	17pF	2,90	
6JB0656 16505ST 220Y0F	650V	650V	650V	20A	9A	6A	42A	83W	36W	1,38V	1,65V	5uA	50uA	22nC	33pF	1,80	
6JB0658 16505ST 220Y0F	650V	650V	650V	26A	11,7A	8A	64A	100W	43W	1,40V	1,65V	2uA	50uA	28nC	42pF	1,50	
6JB065A 17005ST 220Y0F	650V	650V	650V	33A	15A	10A	70A	117W	50W	1,40V	1,70V	2uA	50uA	36nC	52pF	1,28	
6JB065B 17010ST 220Y0F	650V	650V	650V	43A	19,5A	15A	120A	150W	65W	1,42V	1,70V	3uA	100uA	47nC	69pF	1,00	
6JB065C 17010ST 220Y0F	650V	650V	650V	63A	28A	20A	160A	214W	92W	1,40V	1,70V	10uA	100uA	75nC	11pF	0,70	
6JB1202 16505ST 220Y0F	1200V	1200V	1200V	9A	4A	2A	26A	52W	22W	1,40V	1,65V	3uA	50uA	14nC	9pF	2,90	
6JB1205 17010ST 220Y0F	1200V	1200V	1200V	20A	9,7A	5A	55A	117W	51W	1,40V	1,70V	1uA	100uA	37nC	26pF	1,28	
6JB1208 17510ST 220Y0F	1200V	1200V	1200V	28A	13A	8A	70A	161W	70W	1,45V	1,75V	3uA	100uA	53nC	39pF	0,93	
6JB120A 17505ST 220Y0F	1200V	1200V	1200V	36,7A	17A	10A	96A	185W	80W	1,45V	1,75V	5uA	100uA	61nC	42pF	0,81	
6JB120C 17520ST 220Y0F	1200V	1200V	1200V	69A	32A	20A	140A	333W	144W	1,45V	1,75V	15uA	200uA	126nC	95pF	0,45	

Note:

1. Pulse test with PW=0,3ms, duty cycle=2%
2. Pulse test with PW=30ms

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB065416503ST220Y0F)

(TA = 25°C unless otherwise noted)

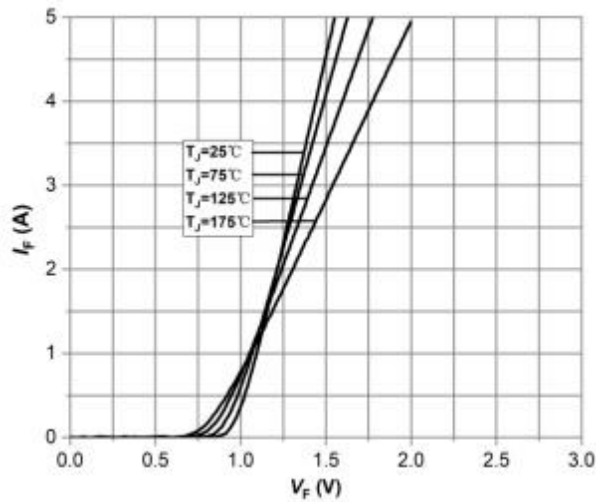


Fig.1 - Forward Characteristics

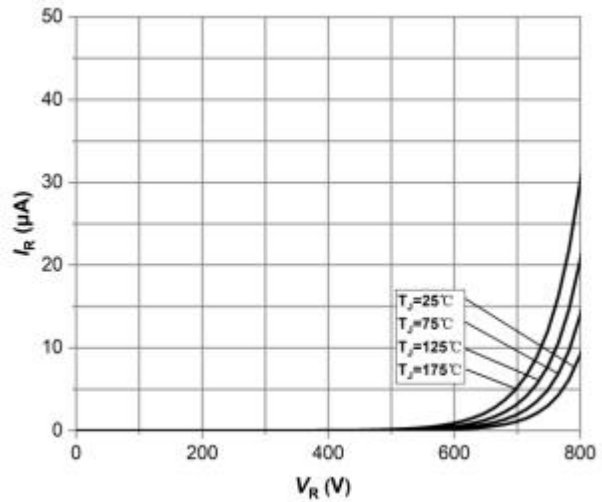


Fig.2 - Reverse Characteristics

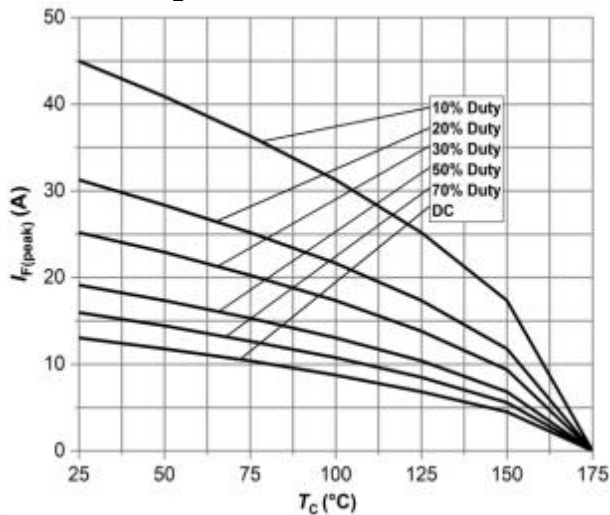


Fig.3 - Current Derating

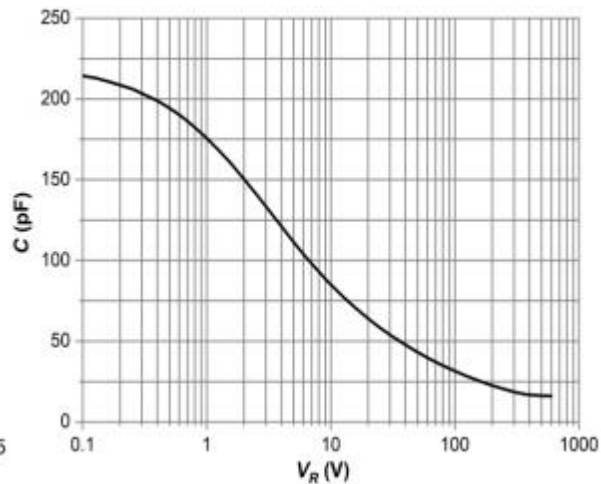


Fig.4 - Capacitance vs. Reverse Voltage

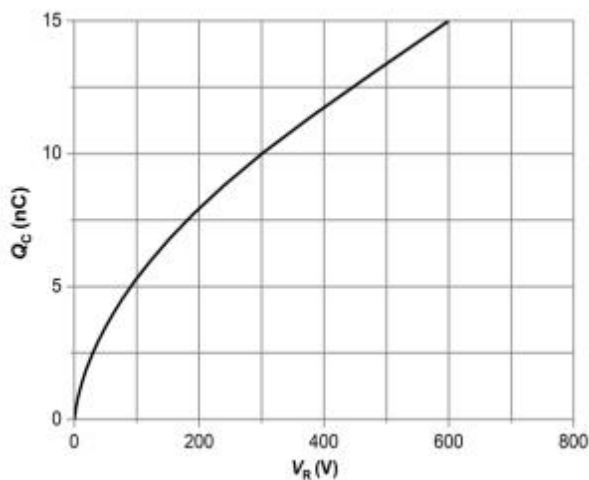


Fig.5 - Total Capacitance Charge vs. Reverse Voltage

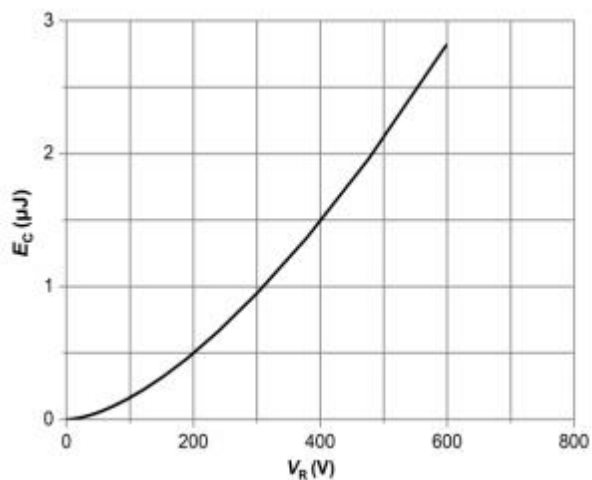


Fig.6 - Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB065616505ST220Y0F)

(TA = 25°C unless otherwise noted)

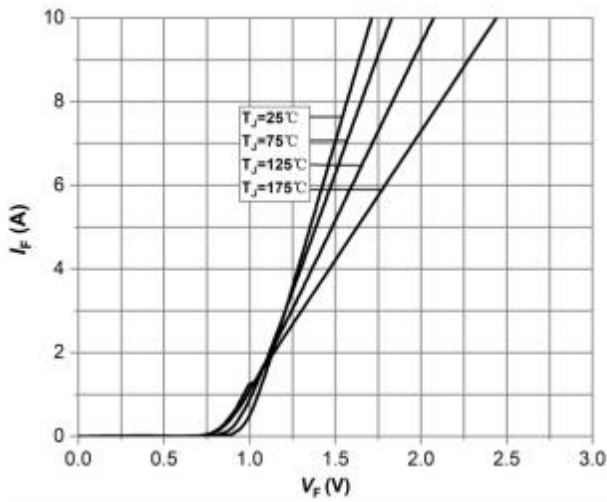


Fig.1 - Forward Characteristics

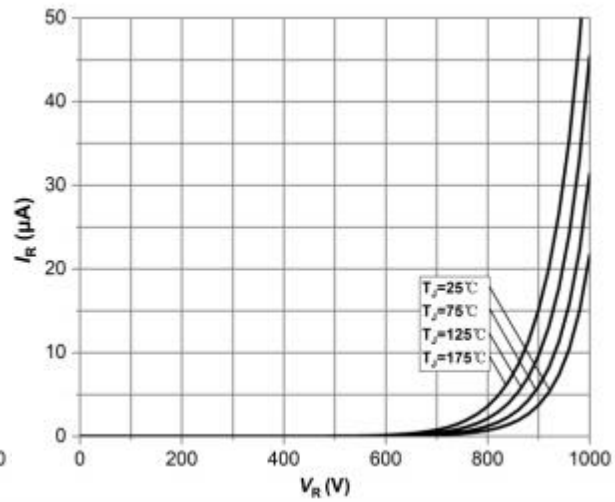


Fig.2 - Reverse Characteristics

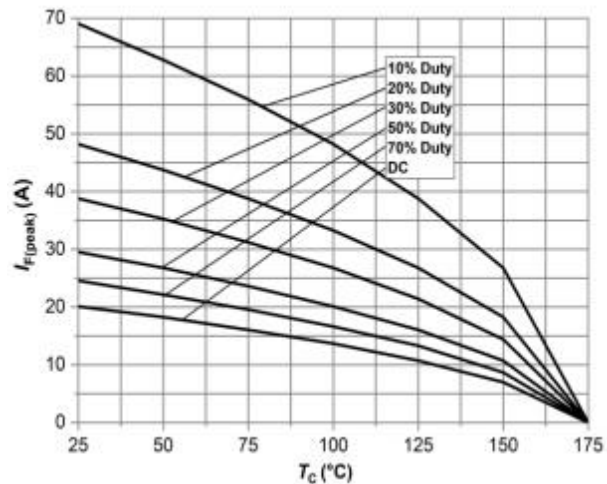


Fig.3 - Current Derating

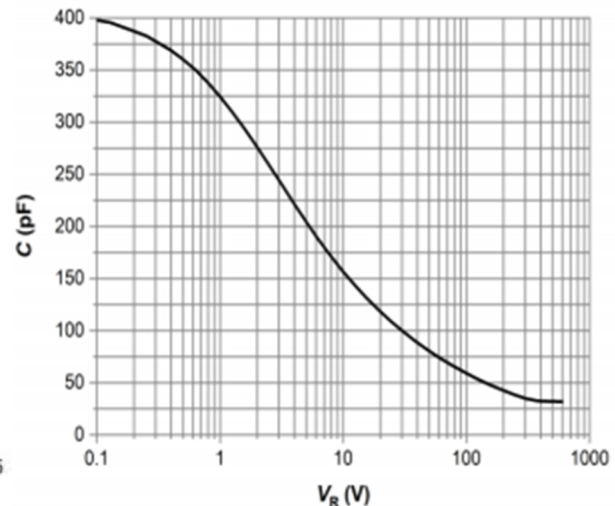


Fig.4 - Capacitance vs. Reverse Voltage

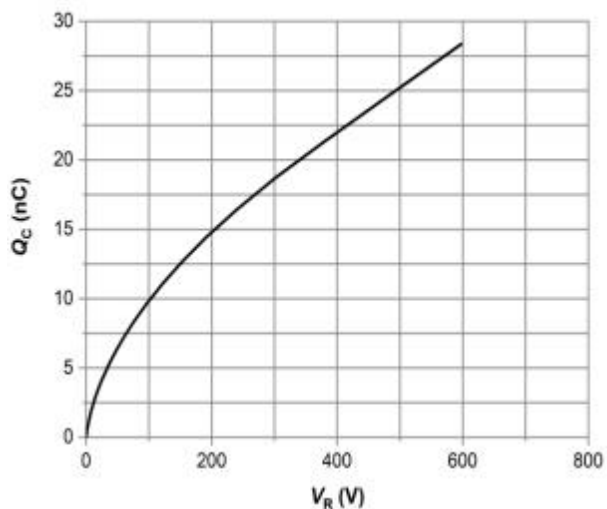


Fig.5 - Total Capacitance Charge vs. Reverse Voltage

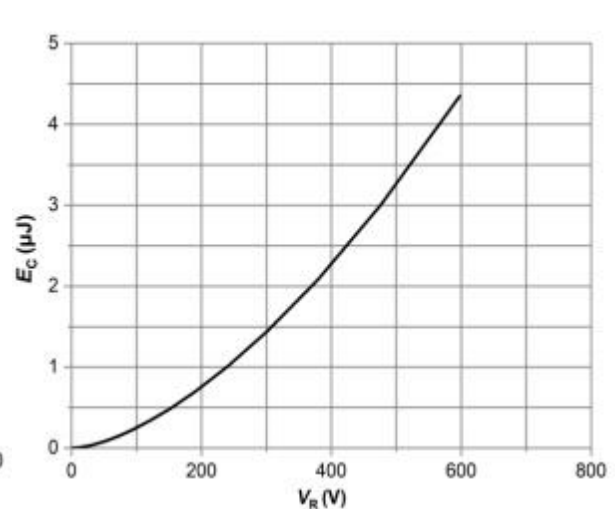


Fig.6 - Typical Capacitance Stored Energy

**TO-220AC
Ratings and Characteristics Curves**

**Silicon Carbide Schottky Diode
(6JB065816505ST220Y0F)**

(TA = 25°C unless otherwise noted)

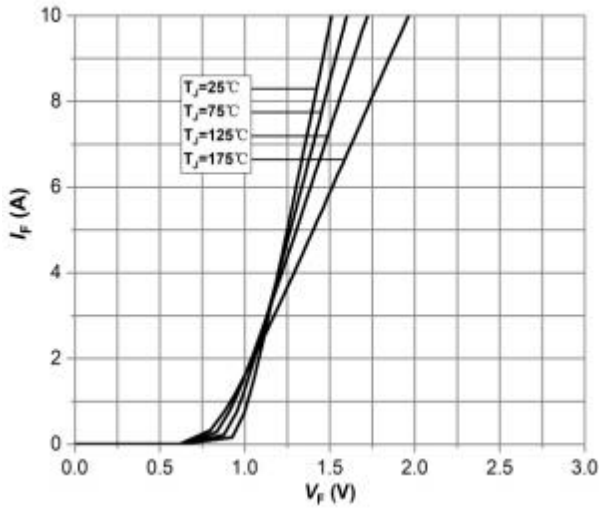


Fig.1 –Forward Characteristics

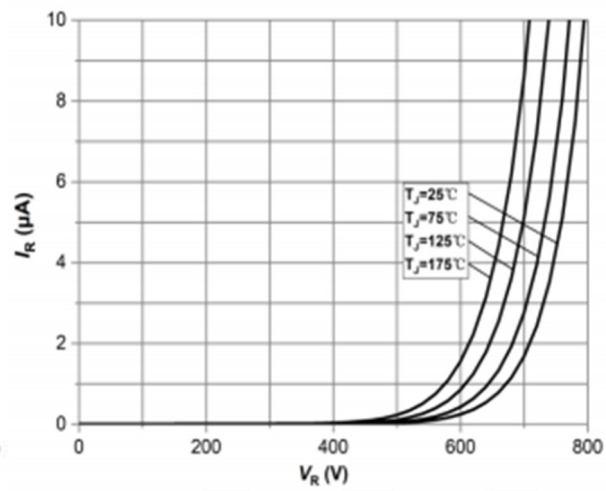


Fig.2 – Reverse Characteristics

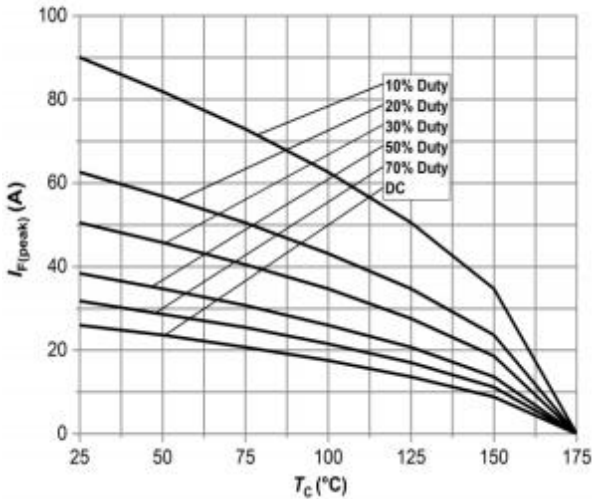


Fig.3 –Current Derating

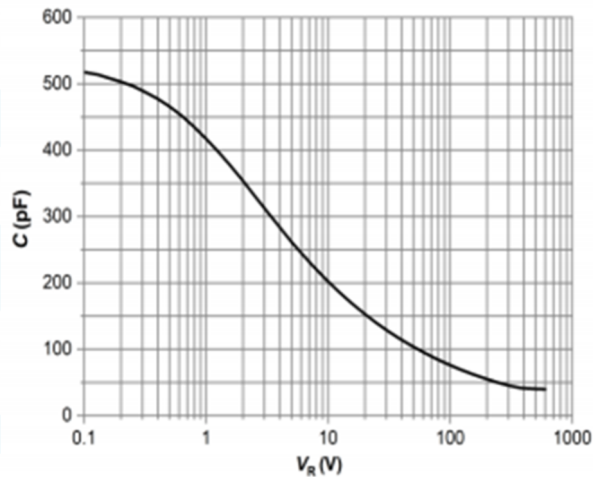


Fig.4 –Capacitance vs. Reverse Voltage

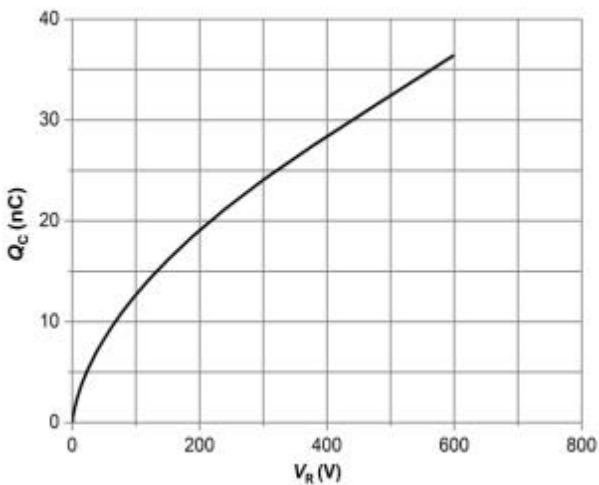


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

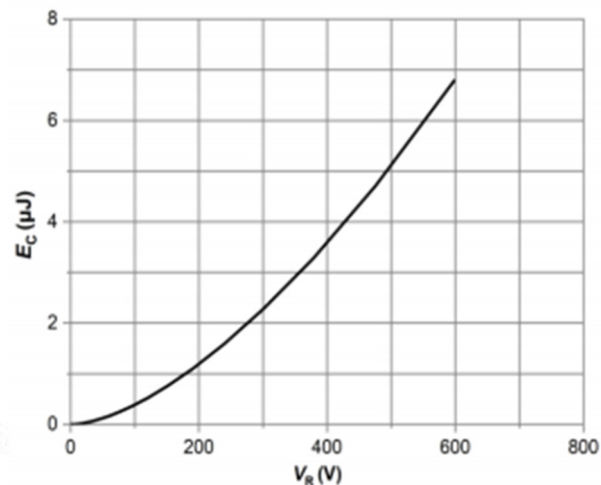


Fig.6 –Typical Capacitance Stored Energy

**TO-220AC
Ratings and Characteristics Curves**

**Silicon Carbide Schottky Diode
(6JB065A17005ST220Y0F)**

(TA = 25°C unless otherwise noted)

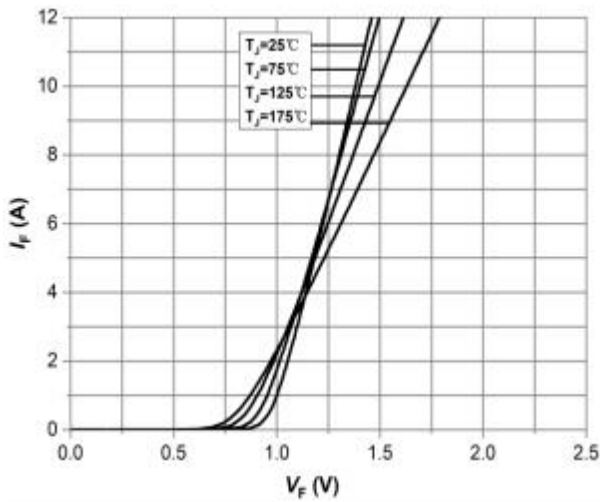


Fig.1 –Forward Characteristics

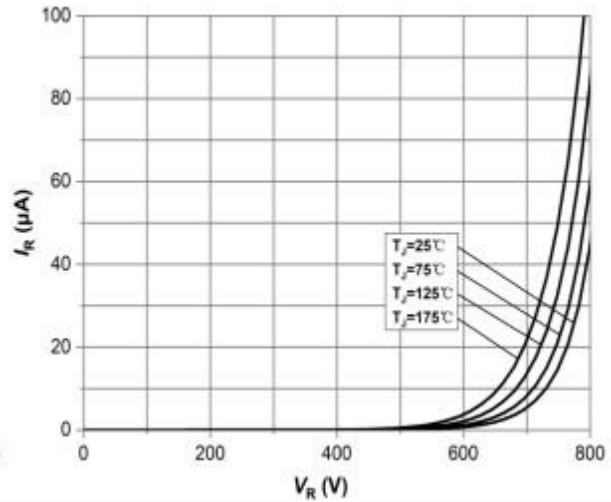


Fig.2 – Reverse Characteristics

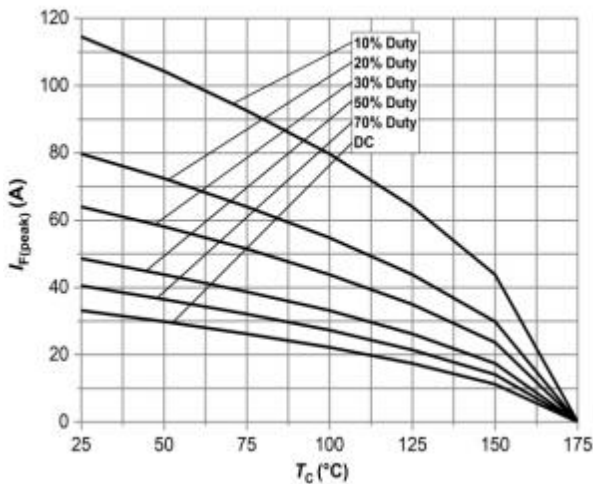


Fig.3 –Current Derating

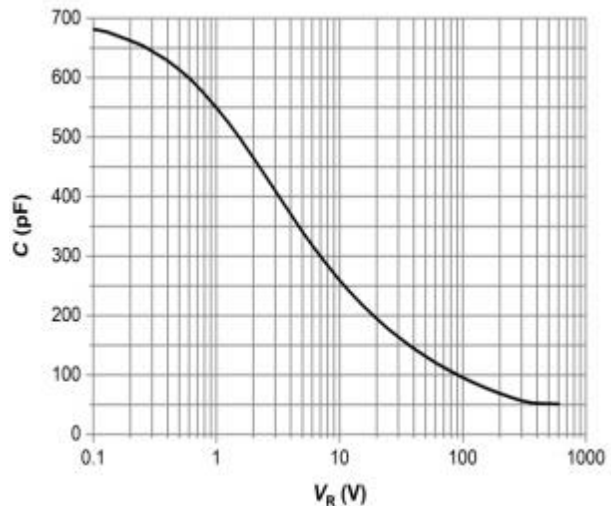


Fig.4 –Capacitance vs. Reverse Voltage

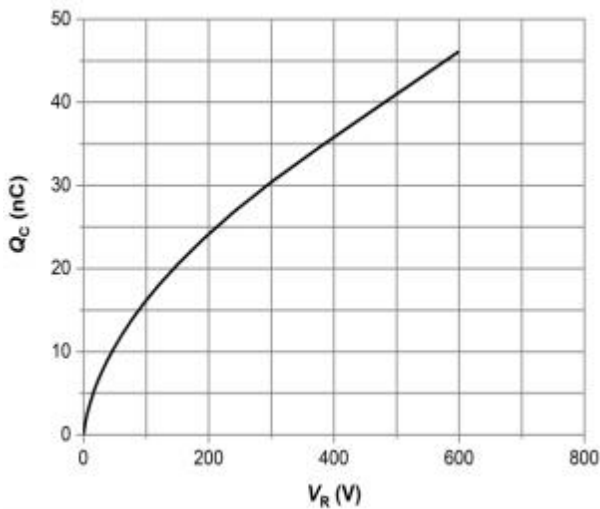


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

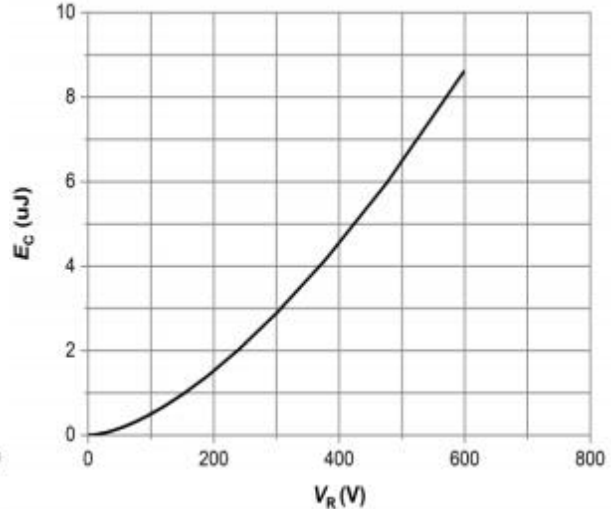


Fig.6 –Typical Capacitance Stored Energy

**TO-220AC
Ratings and Characteristics Curves**

**Silicon Carbide Schottky Diode
(6JB065B17010ST220Y0F)**

(TA = 25°C unless otherwise noted)

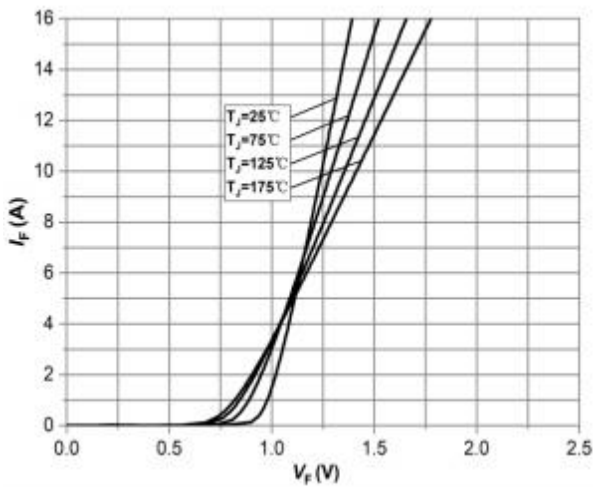


Fig.1 - Forward Characteristics

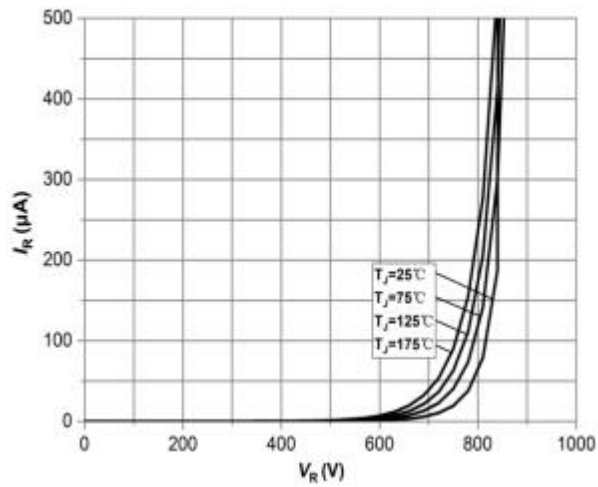


Fig.2 - Reverse Characteristics

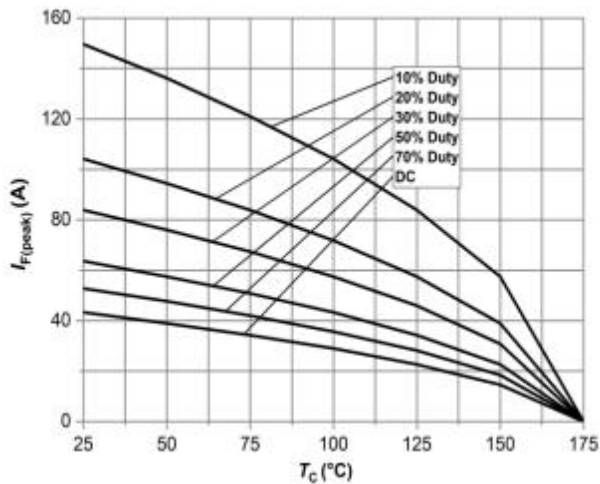


Fig.3 - Current Derating

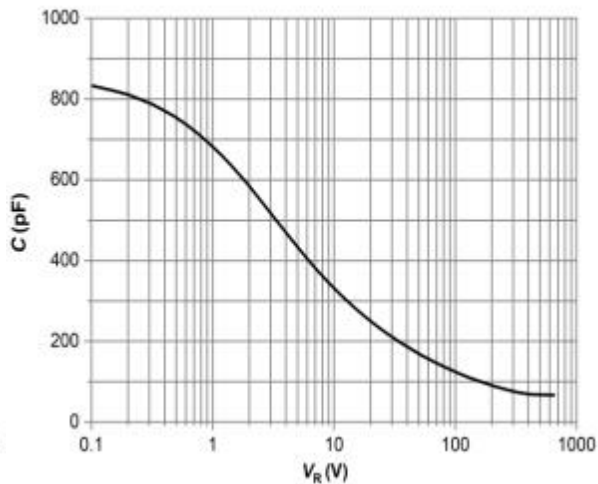


Fig.4 - Capacitance vs. Reverse Voltage

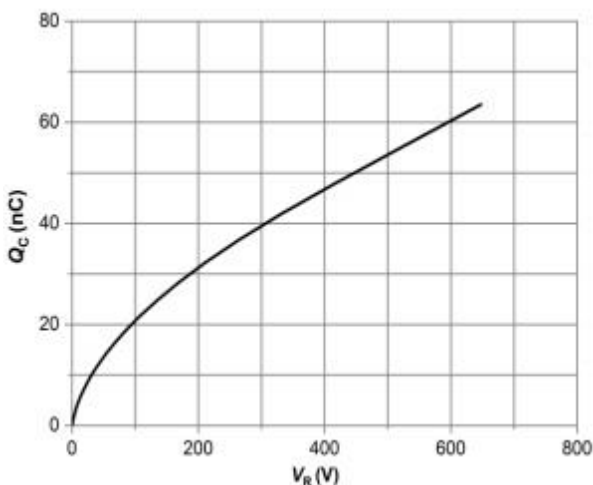


Fig.5 - Total Capacitance Charge vs. Reverse Voltage

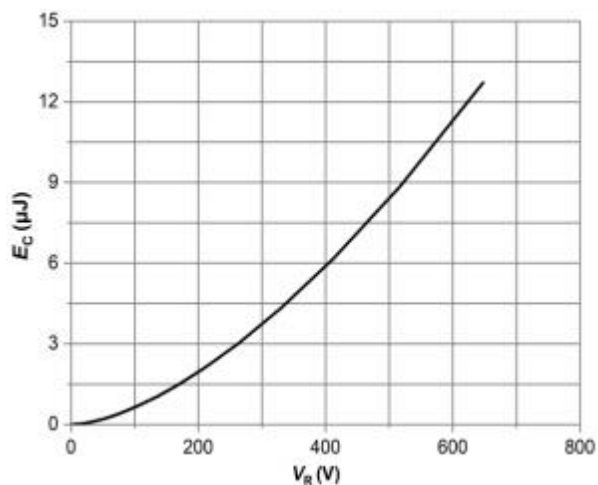


Fig.6 - Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB065C17010ST220Y0F)

(TA = 25°C unless otherwise noted)

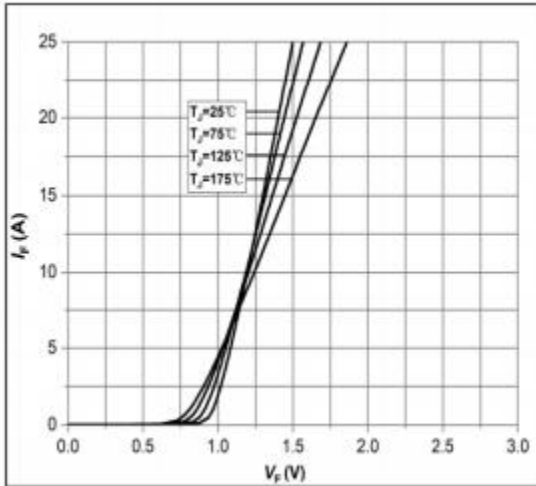


Fig.1 –Forward Characteristics

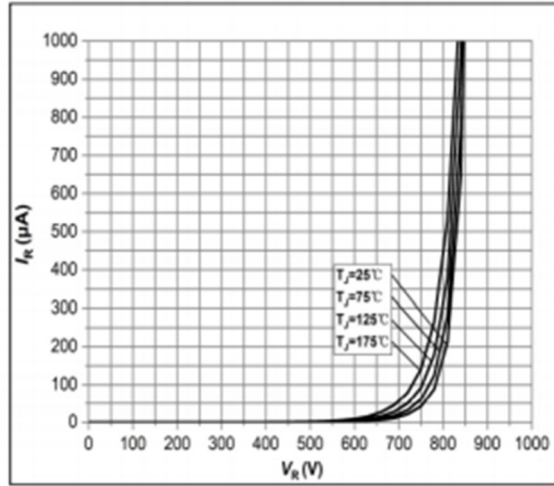


Fig.2 – Reverse Characteristics

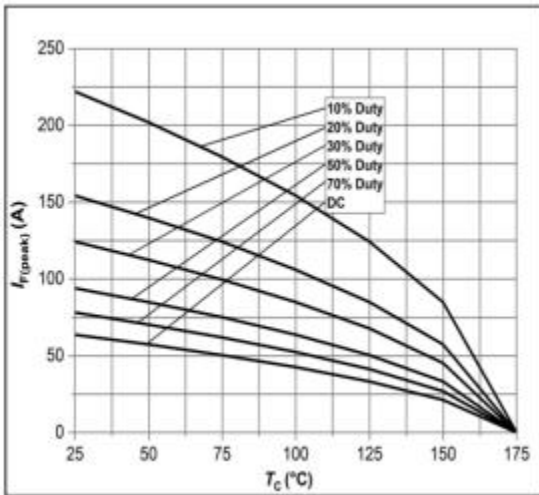


Fig.3 –Current Derating

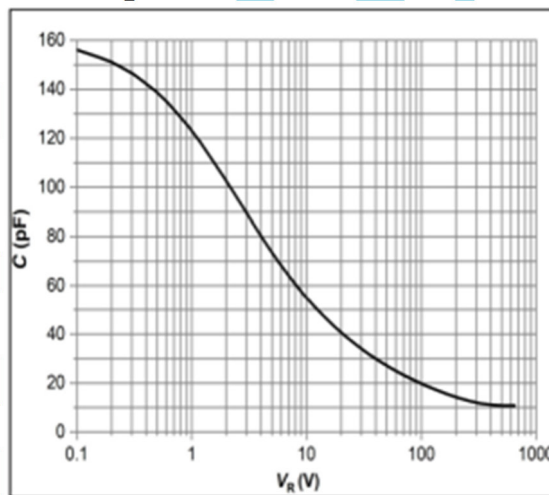


Fig.4 –Capacitance vs. Reverse Voltage

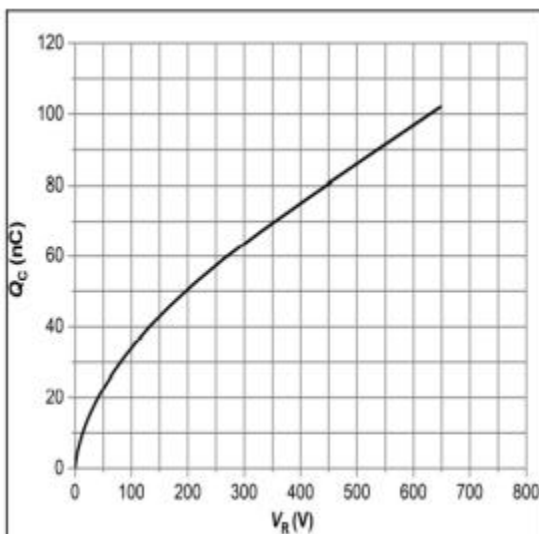


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

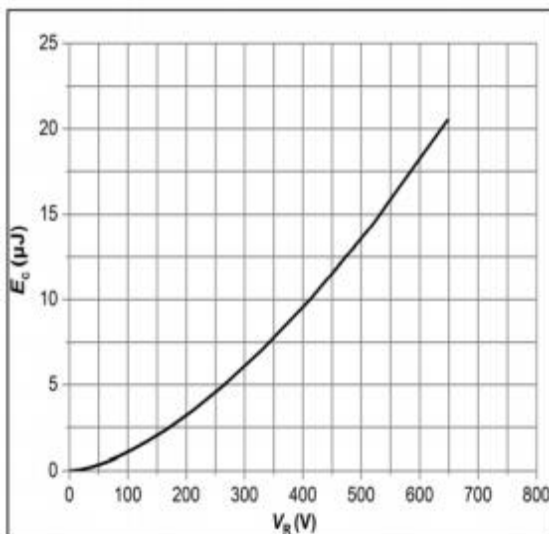


Fig.6 –Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode (6JB120216505ST220Y0F) Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

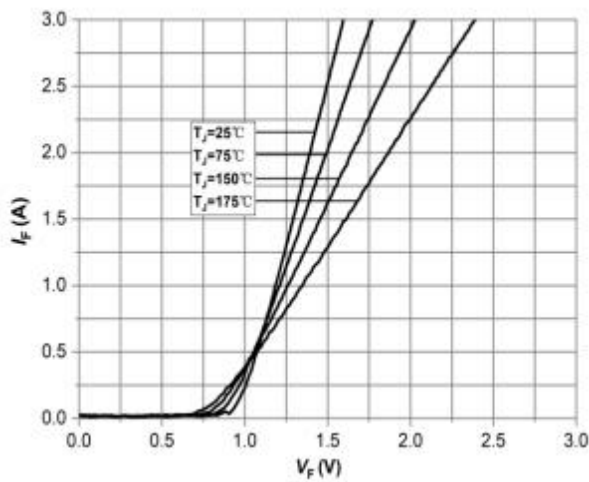


Fig.1 -Forward Characteristics

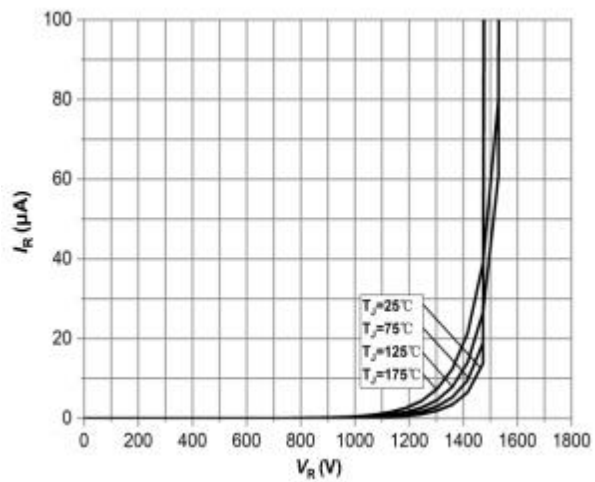


Fig.2 - Reverse Characteristics

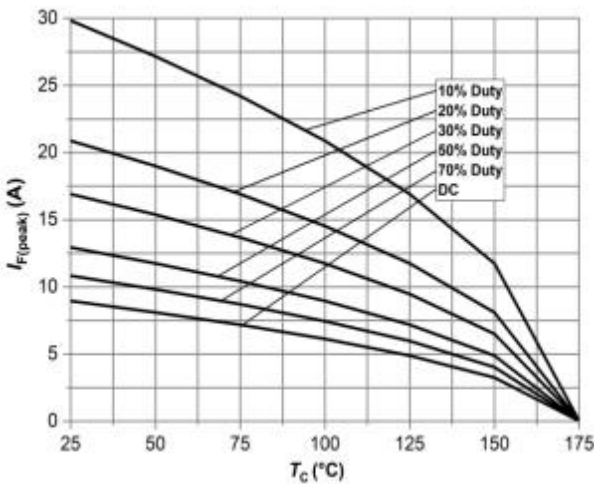


Fig.3 -Current Derating

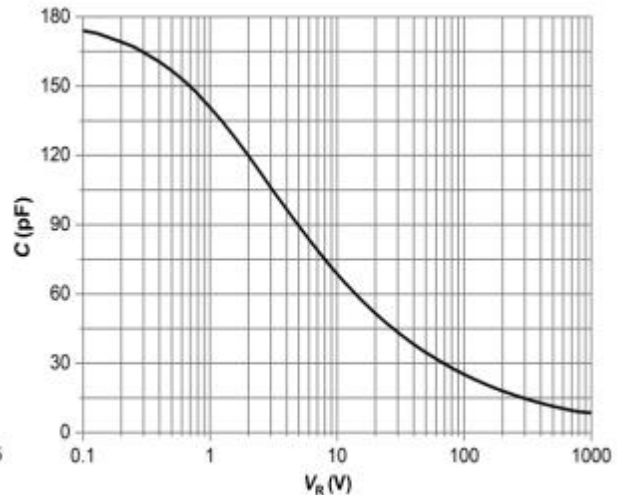


Fig.4 -Capacitance vs. Reverse Voltage

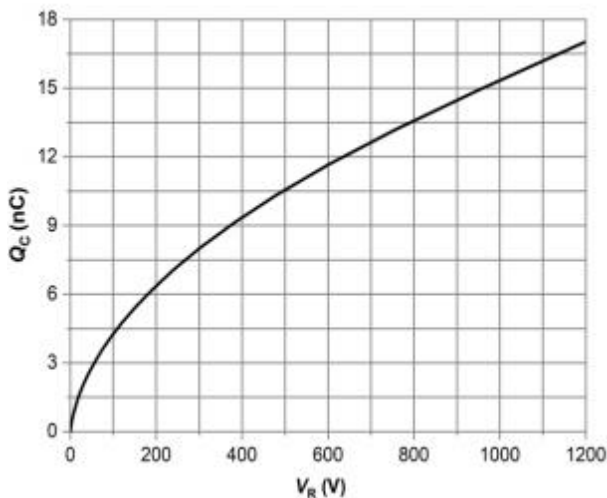


Fig.5 -Total Capacitance Charge vs. Reverse Voltage

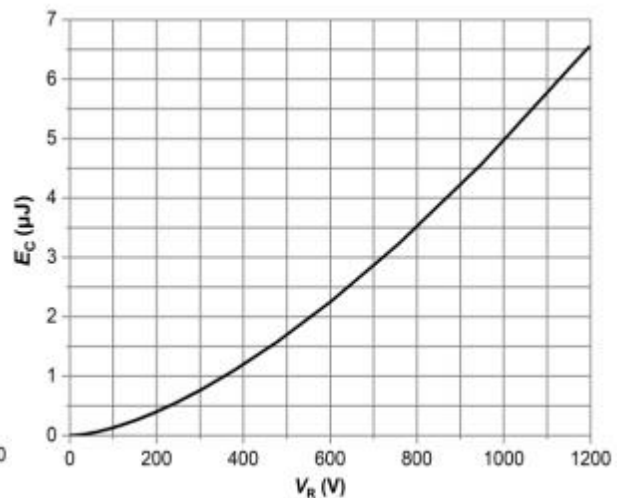


Fig.6 -Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB120517010ST220Y0F)

(TA = 25°C unless otherwise noted)

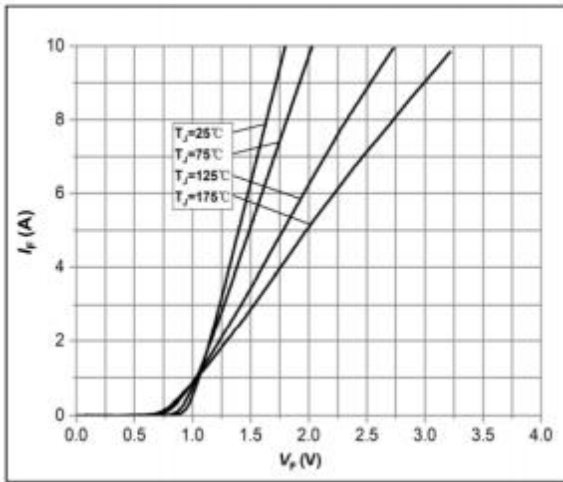


Fig.1 - Forward Characteristics

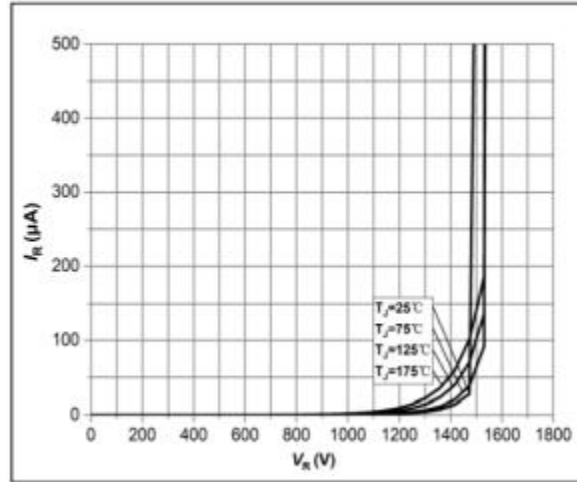


Fig.2 - Reverse Characteristics

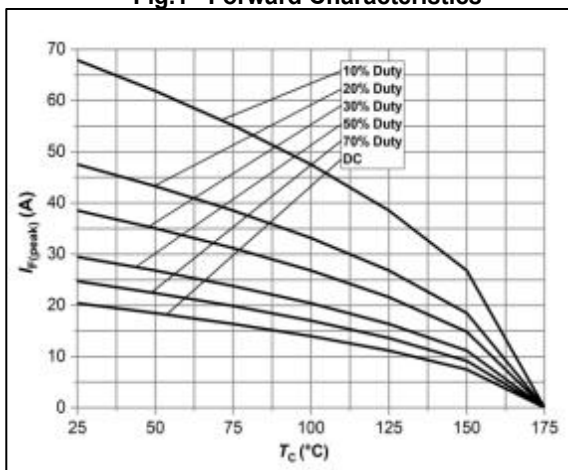


Fig.3 - Current Derating

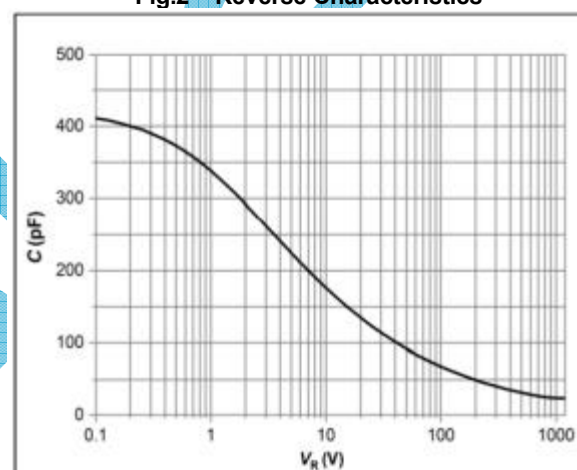


Fig.4 - Capacitance vs. Reverse Voltage

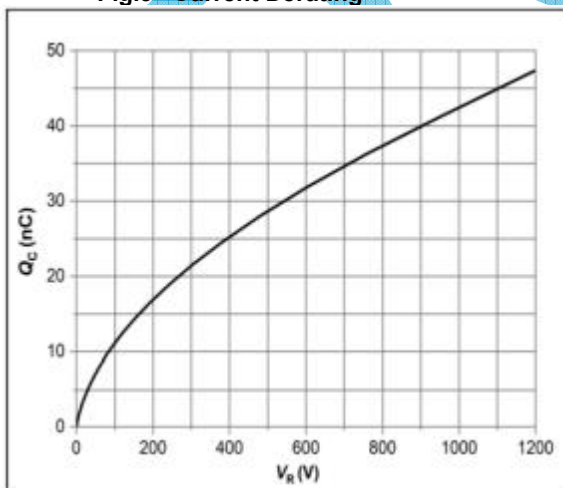


Fig.5 - Total Capacitance Charge vs. Reverse Voltage

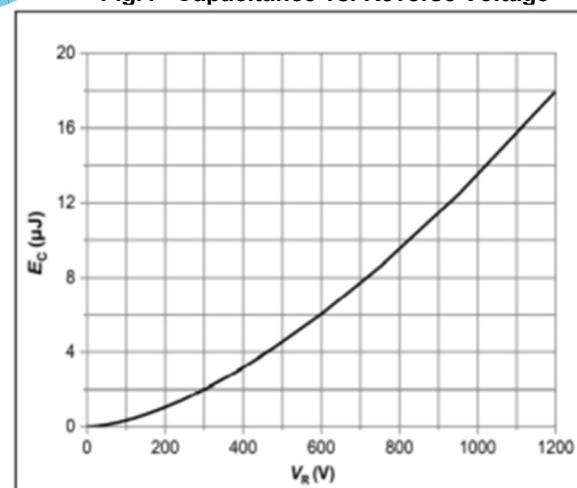


Fig.6 - Typical Capacitance Stored Energy

TO-220AC

Silicon Carbide Schottky Diode

Ratings and Characteristics Curves (6JB120817510ST220Y0F)

(TA = 25°C unless otherwise noted)

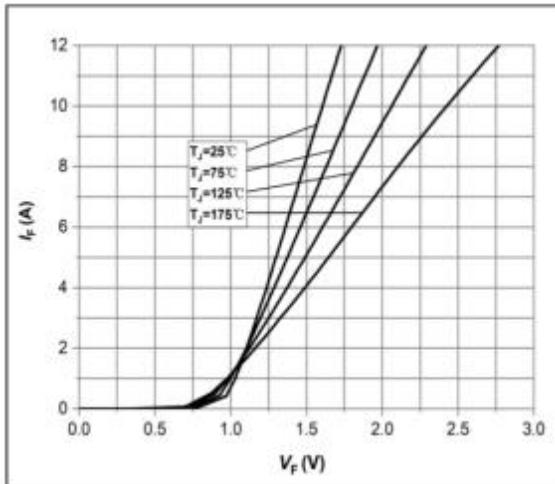


Fig.1 –Forward Characteristics

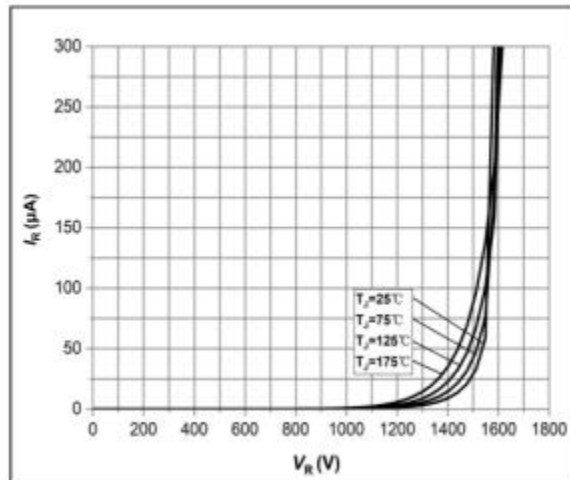


Fig.2 – Reverse Characteristics

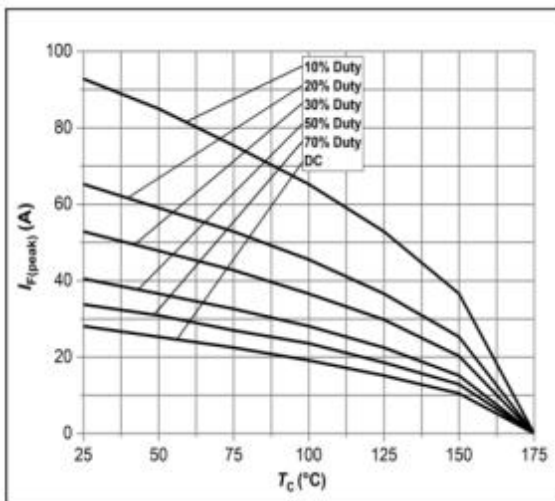


Fig.3 –Current Derating

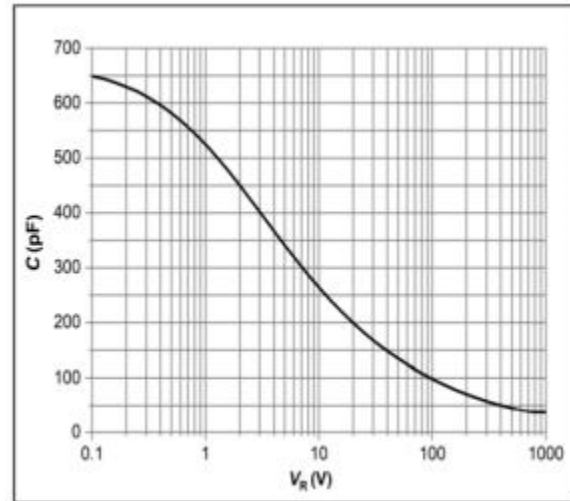


Fig.4 –Capacitance vs. Reverse Voltage

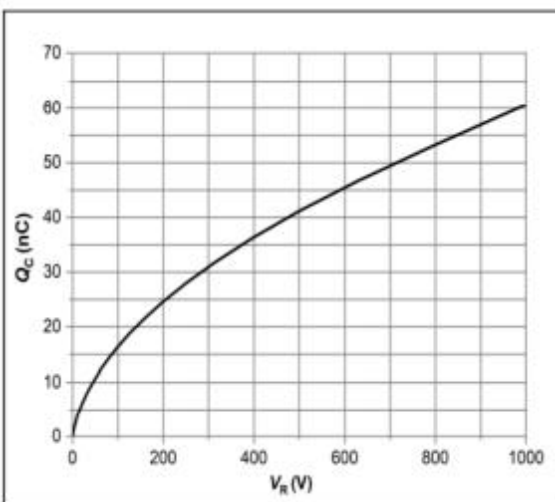


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

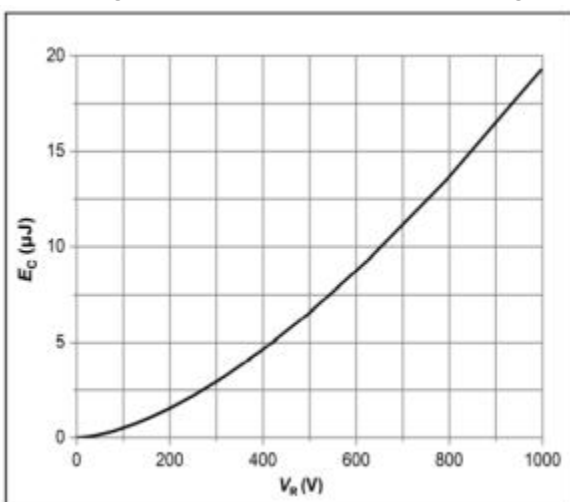


Fig.6 –Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB120A17505ST220Y0F)

(TA = 25°C unless otherwise noted)

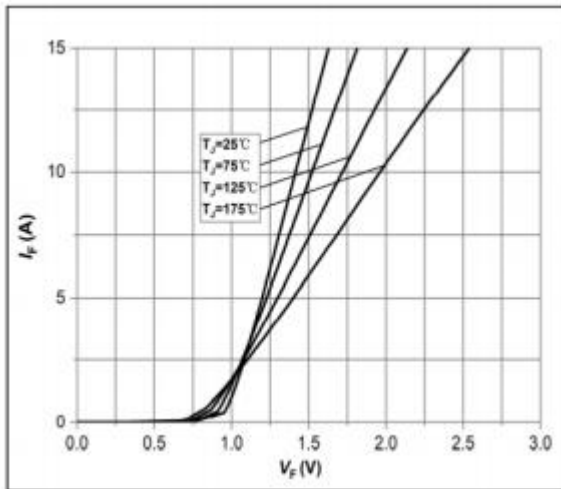


Fig.1 - Forward Characteristics

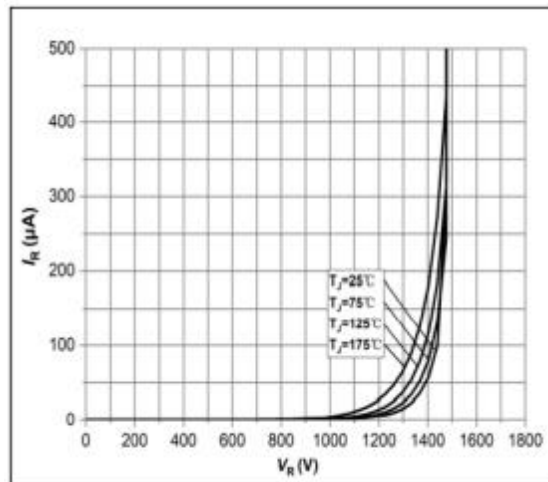


Fig.2 - Reverse Characteristics

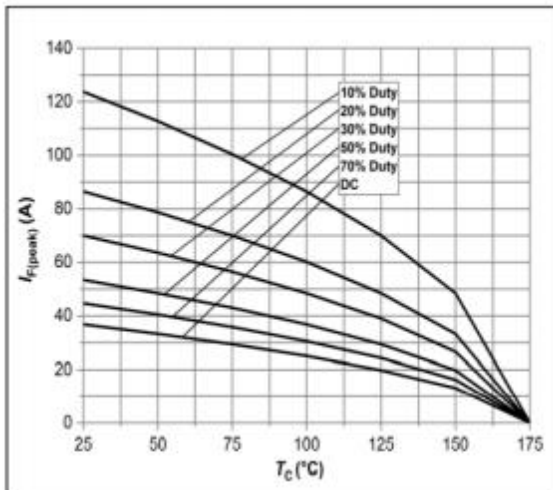


Fig.3 - Current Derating

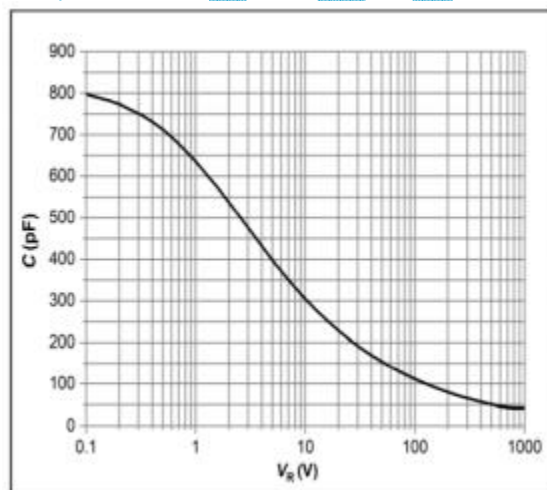


Fig.4 - Capacitance vs. Reverse Voltage

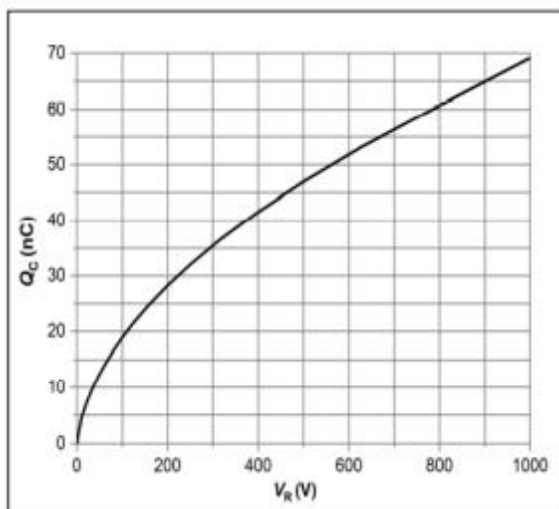


Fig.5 - Total Capacitance Charge vs. Reverse Voltage

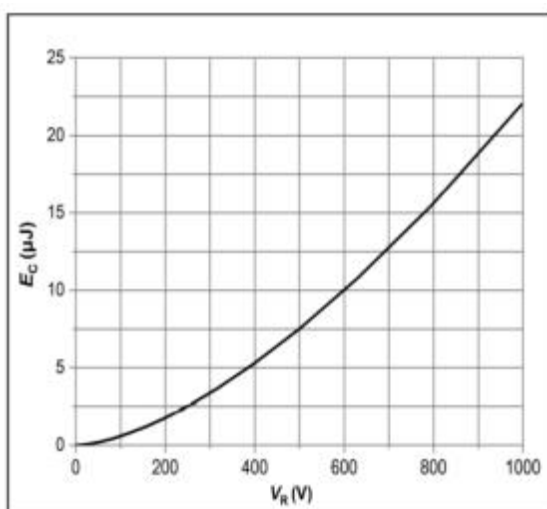


Fig.6 - Typical Capacitance Stored Energy

TO-220AC Silicon Carbide Schottky Diode Ratings and Characteristics Curves (6JB120C17520ST220Y0F)

(TA = 25°C unless otherwise noted)

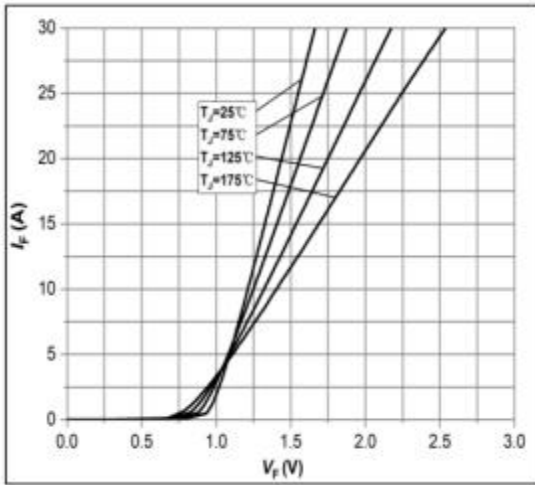


Fig.1 –Forward Characteristics

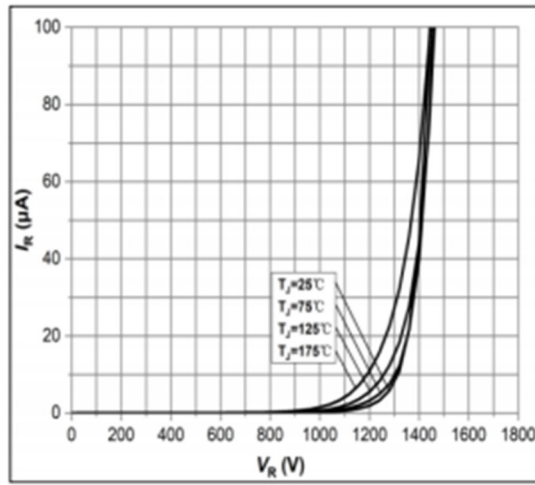


Fig.2 – Reverse Characteristics

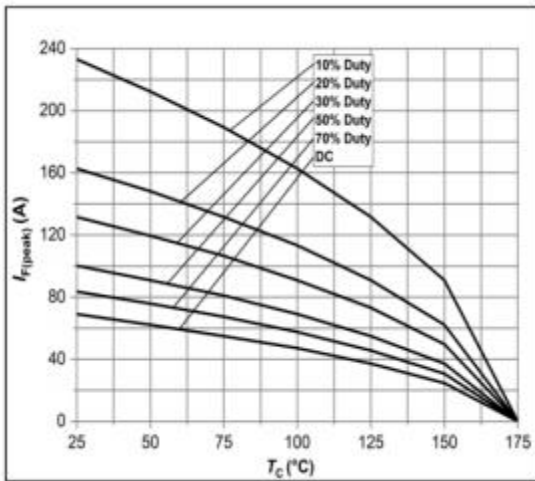


Fig.3 –Current Derating

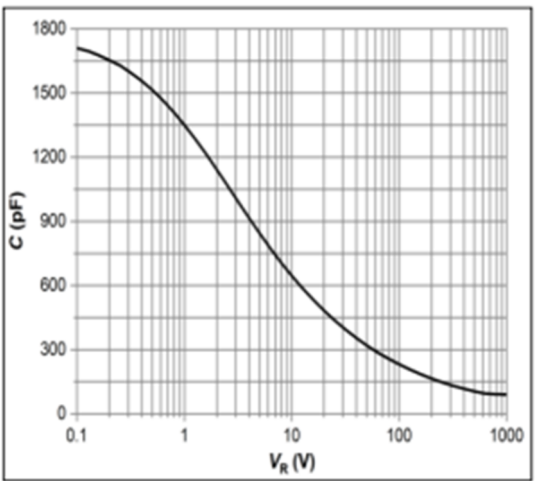


Fig.4 –Capacitance vs. Reverse Voltage

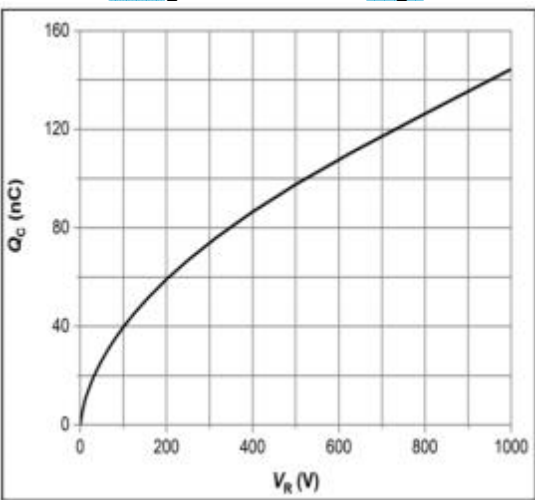


Fig.5 –Total Capacitance Charge vs. Reverse Voltage

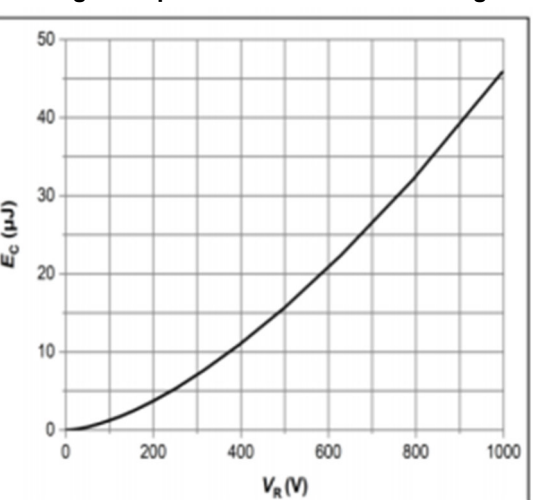
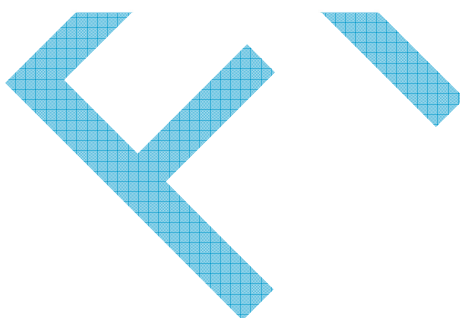
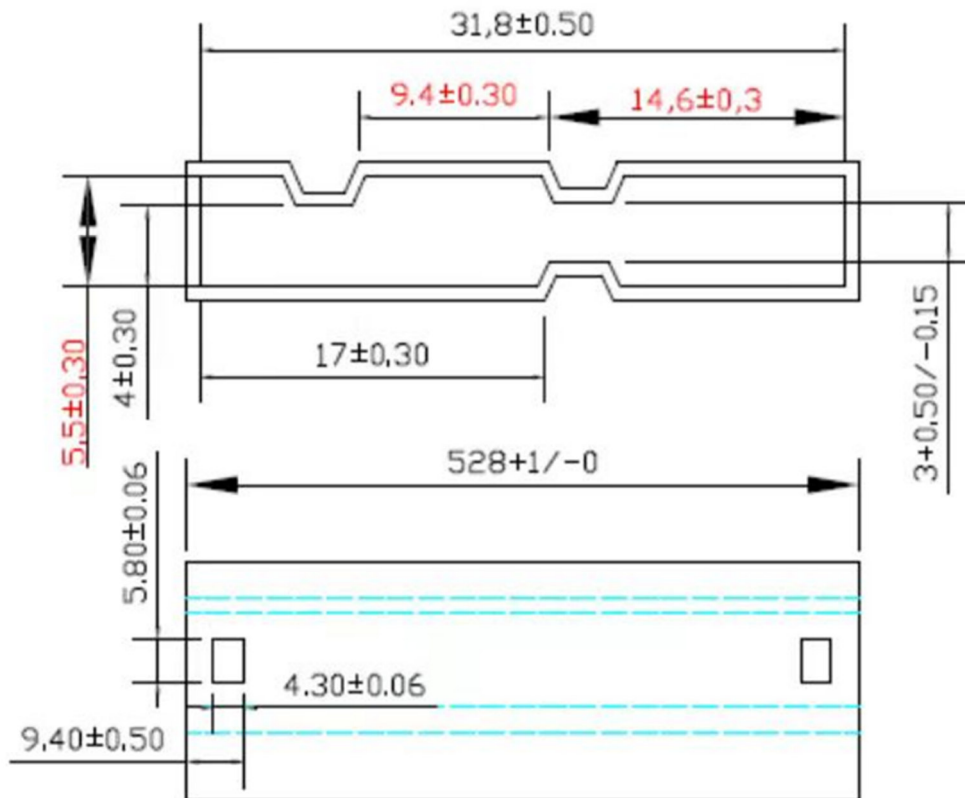


Fig.6 –Typical Capacitance Stored Energy

TO-220AC

SPECIFICATION

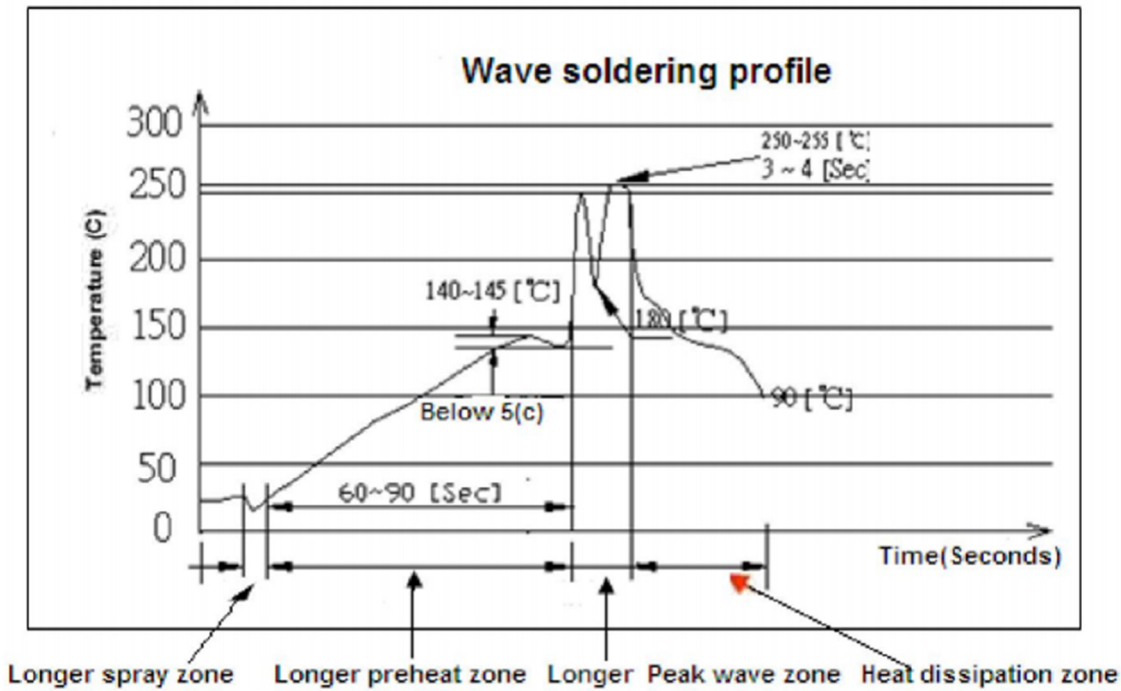
TUBE Package



TO-220AC

Silicon Carbide Schottky Diode

Lead Free Reflow Soldering Profile



FrelTec

Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

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