

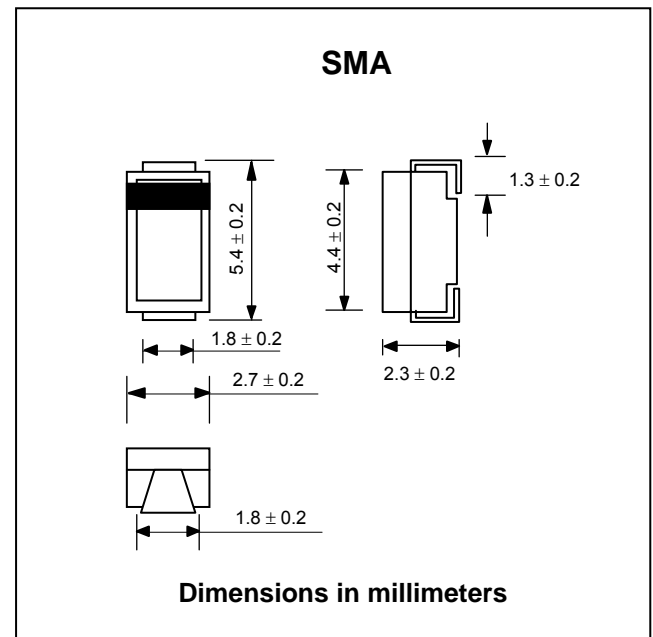
BZG03-C220 ~ BZG03-C270 VOLTAGE REGULATOR DIODES

FEATURES :

- * Complete Voltage Range 220 to 270 Volts
- * High maximum operating temperature
- * Excellent stability
- * Low leakage current
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.060 gram (Approximately)



MAXIMUM RATINGS (Rating at 25 °C ambient temperature unless otherwise specified)

Parameter	Symbol	Condition	Min.	Max.	Unit
Power dissipation	P_{tot}	$T_{tp} = 100\text{ }^{\circ}\text{C}$, see Fig. 1	-	3	W
Power dissipation	P_{tot}	$T_a = 50\text{ }^{\circ}\text{C}$, see Fig. 1; device mounted on an Al_2O_3 PCB (Fig. 4)	-	1.25	W
Non-repetitive peak reverse	P_{ZSM}	$t_p = 100\text{ }\mu\text{s}$; square pulse; $T_j = 25\text{ }^{\circ}\text{C}$ prior to surge; see Fig. 2	-	600	W
Forward voltage	V_F	$I_F = 0.5\text{ A}$; $T_j = 25\text{ }^{\circ}\text{C}$; see Fig. 3	-	2.0	V
Junction Temperature Range	T_j		-65	+175	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}		-65	+175	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

Parameter	Symbol	Condition	Value	Unit
Thermal resistance from junction to tie-point	$R_{th\ j-tp}$		25	K/W
Thermal resistance from junction to ambient	$R_{th\ j-a}$	(Note 1)	100	K/W

Note

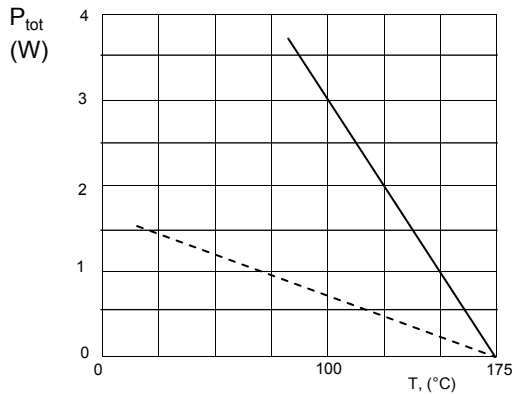
1. Device mounted on an Al_2O_3 printed-circuit board, 0.7 mm thick; thickness of Cu-layer $\geq 35\text{ }\mu\text{m}$, see Fig.4.

ELECTRICAL CHARACTERISTICS (Rating at $T_j = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Type No.	Marking Code	Working Voltage			Differential Resistance		Temperature Coefficient		Test Current	Maximum Reverse Leakage Current	
		$V_Z @ I_Z$			$r_{diff}(\Omega) \text{ at } I_Z$		$S_Z (\%/K) \text{ at } I_Z$		I_Z	$I_R @ V_R$	
		Min.	Nom.	Max.	Typ.	Max.	Min.	Max.	(mA)	(mA)	(V)
BZG03-C220	C220	208	220	233	350	750	0.09	0.13	2	1.0	160
BZG03-C240	C240	228	240	256	400	850	0.09	0.13	2	1.0	180
BZG03-C270	C270	251	270	289	450	1000	0.09	0.13	2	1.0	200

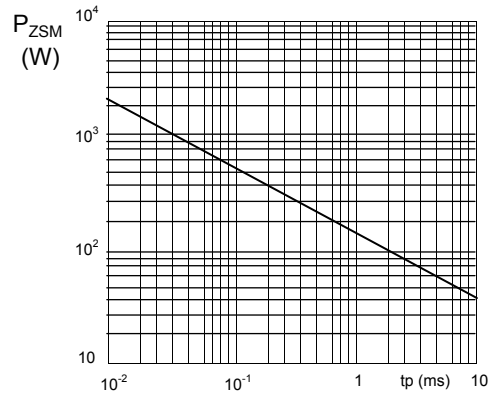
RATING AND CHARACTERISTIC CURVES (BZG03-C220 ~ BZG03-C270)

FIG.1 - Maximum total power dissipation as a function of temperature.



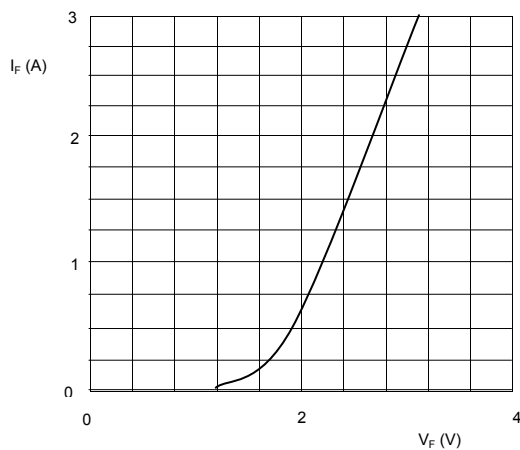
Solid line: tie-point temperature.
Dotted line: ambient temperature; device mounted on an Al₂O₃ PCB as shown in Fig.5.

FIG.2 - Maximum non-repetitive peak reverse power dissipation as a function of pulse duration (square pulse).



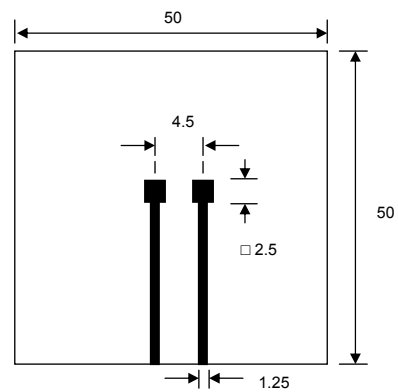
T_j = 25 °C prior to surge.

FIG. 3 - Forward current as a function of forward voltage; typical values.



T_j = 25 °C.

FIG.4 - Printed-circuit board for surface mounting.



Dimensions in mm.