

MMSZ4678 - MMSZ4688

V_Z : 1.8 to 4.7 V

P_D : 500 mW

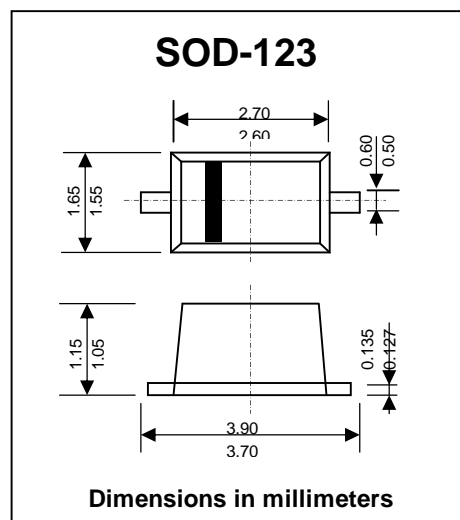
FEATURES :

- * Total Power Dissipation 500 mW on FR-4 or FR-5 Board
- * Package Designed for Optimal Automated Board Assembly
- * Small Package Size for High Density Applications
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOD-123
- * Weight : 0.01 gram (approximately)

ZENER DIODES



Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Total Power Dissipation on FR-5 Board, at $T_L = 75\text{ }^\circ\text{C}$	P_D	500 ⁽¹⁾	mW
Derated above 75 °C		6.7	mW/°C
Maximum Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.95	V
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	340	°C/W
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	°C/W
Junction Temperature Range	T_J	-55 to + 150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C

Note : (1) FR-5 = 3.5 x 1.5 inches, using the minimum recommended footprint.

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Type No.	Marking	Zener Voltage ^(1,2)			Test Current	Maximum Reverse Leakage Current	
		V_Z @ I_{ZT} (V)				I_{ZT}	I_R @ V_R
		Min.	Nom.	Max.	(μA)		
MMSZ4678	BC	1.71	1.8	1.89	50	7.5	1.0
MMSZ4679	BD	1.90	2.0	2.10	50	5.0	1.0
MMSZ4680	BE	2.09	2.2	2.31	50	4.0	1.0
MMSZ4681	BF	2.28	2.4	2.52	50	2.0	1.0
MMSZ4682	BH	2.565	2.7	2.835	50	1.0	1.0
MMSZ4683	BJ	2.85	3.0	3.15	50	0.8	1.0
MMSZ4684	BK	3.13	3.3	3.47	50	7.5	1.5
MMSZ4685	BM	3.42	3.6	3.78	50	7.5	2.0
MMSZ4686	BN	3.70	3.9	4.10	50	5.0	2.0
MMSZ4687	BP	4.09	4.3	4.52	50	4.0	2.0
MMSZ4688	BR	4.47	4.7	4.94	50	10	3.0

Notes :

(1) Tested with pulses $t_p = 20\text{ ms}$

(2) Nominal Zener voltage is measured with the device junction in thermal equilibrium at $T_L = 30\text{ }^\circ\text{C} \pm 1\text{ }^\circ\text{C}$

RATING AND CHARACTERISTIC CURVES (MMSZ4678 - MMSZ4688)

**FIG.1 - TEMPERATURE COEFFICIENTS
(TEMPERATURE RANGE - 55 °C to +150 °C)**

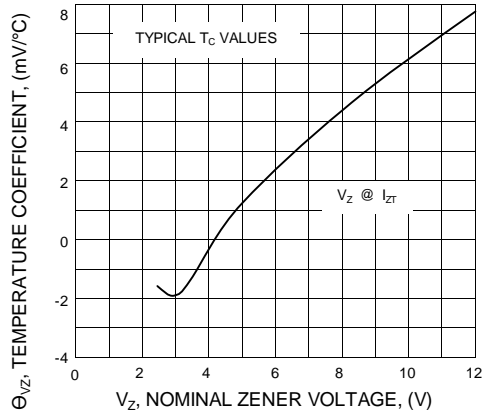


FIG.2 - STEADY STATE POWER DERATING

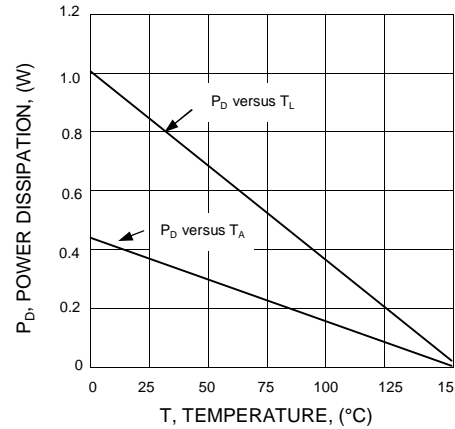


FIG.3 - TYPICAL FORWARD VOLTAGE

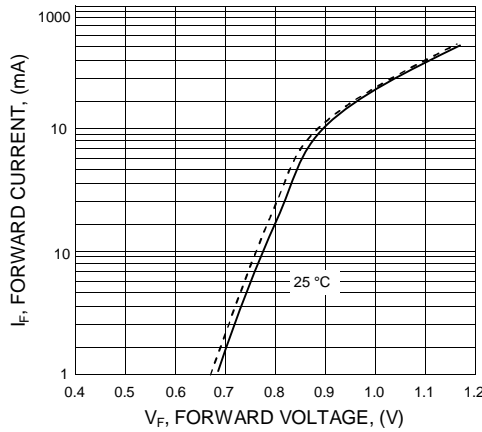


FIG.4 - MAXIMUM NON-REPETITIVE SURGE POWER

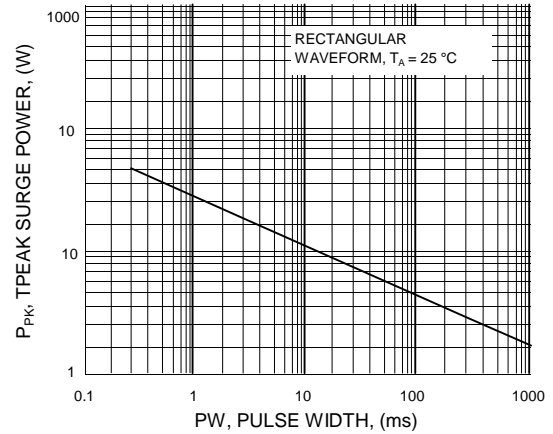


FIG.5 - ZENER VOLTAGE VS. ZENER CURRENT

