

BEST SUITED FOR OVERVOLTAGE PROTECTION  
OF ELECTRONIC SYSTEM :  
ELECTRONIC SYSTEM FOR USE IN AUTOMOBILES  
ELECTRONIC SYSTEM FOR COMMERCIAL USE  
ELECTRONIC SYSTEM FOR INDUSTRIAL USE  
FOR COMMUNICATIONS, CONTROLS, MEASURING  
INSTRUMENTS, ETC.

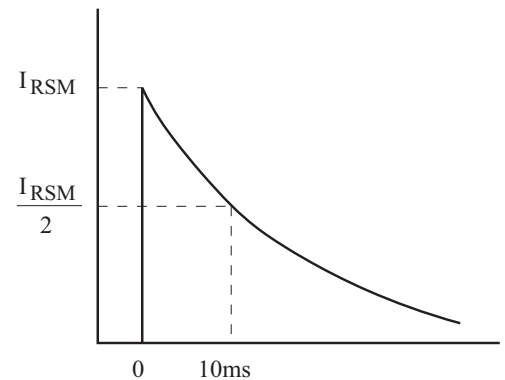
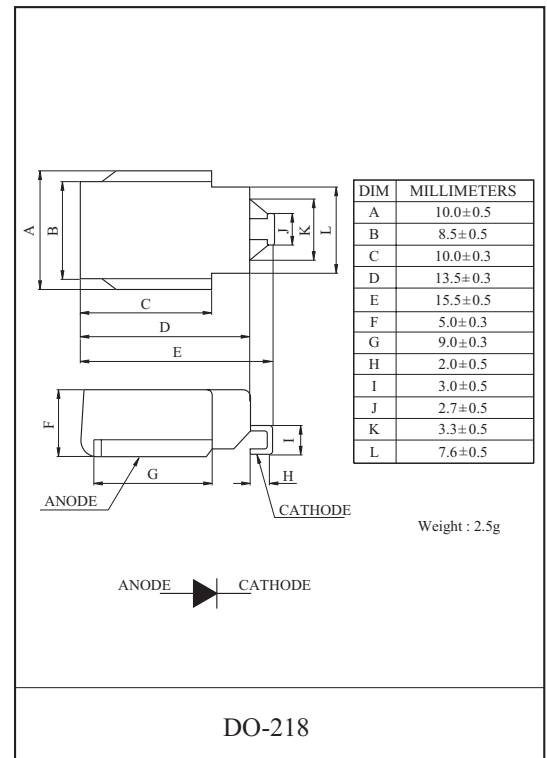
### FEATURES

- High surge power withstanding capabilities that absorb load dump surge.
- Excellent surge responsibility for steep surge absorption.
- Surface mount type is available for easy applications.
- Corresponds to taping packages.
- Automotive AEC Q101 Qualified.
- MSL Level 1 guaranteed ( $T_{peak} = 260^{\circ}\text{C}$ )

### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Allowable Power Dissipation (Note 1)	P	5	W
Non-Repetitive Peak Reverse Surge Current (See Fig.1 for the exponents.)	$I_{RSM}$	50	A
Peak 1-Cycle Surge Forward Current (Single Half Sine-wave, $t=10\text{ms}$ )	$I_{FSM}$	700	A
Junction Temperature	$T_j$	$-55 \sim 175$	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	$-40 \sim 150$	$^{\circ}\text{C}$

Note 1 : Lead tip temperature  $T_L=25^{\circ}\text{C}$ .

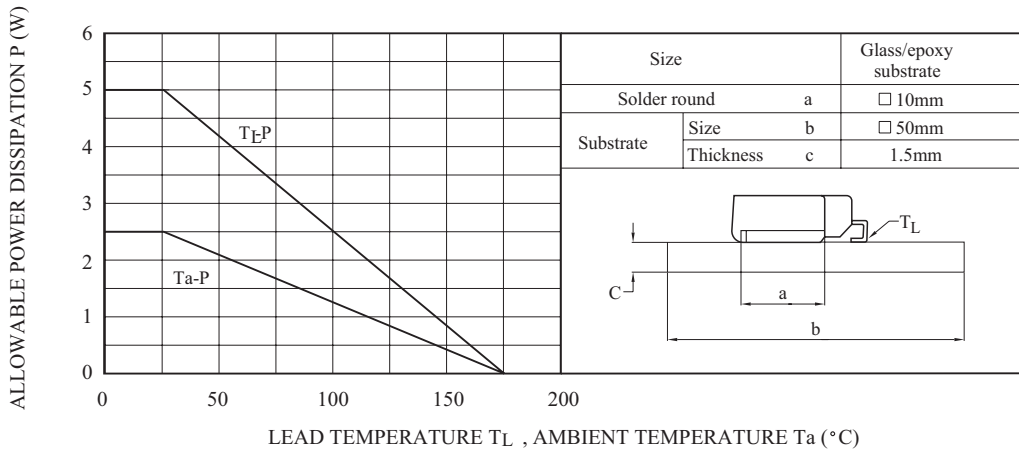


### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ )

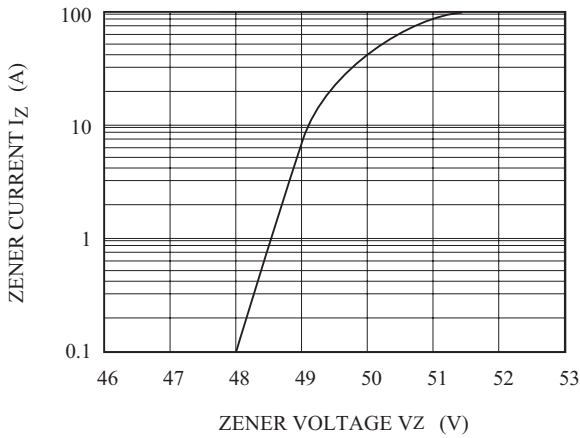
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Zener Voltage	$V_Z$	$I_Z=10\text{mA}$	43.2	48.0	52.8	V
Operating Resistance	$r_d$	$I_Z=10\text{mA}$	-	-	65	$\Omega$
Temperature Coefficient	$\alpha_T$	$I_Z=10\text{mA}$	-	39	62	$\text{mV}/^{\circ}\text{C}$
Forward Voltage	$V_F$	$I_F=6\text{A}$	-	-	1.0	V
		$I_F=100\text{A}$	-	-	1.2	V
Reverse Current	$I_R$	$V_R=38.4\text{V}$	-	-	10	$\mu\text{A}$

# Z5W48V

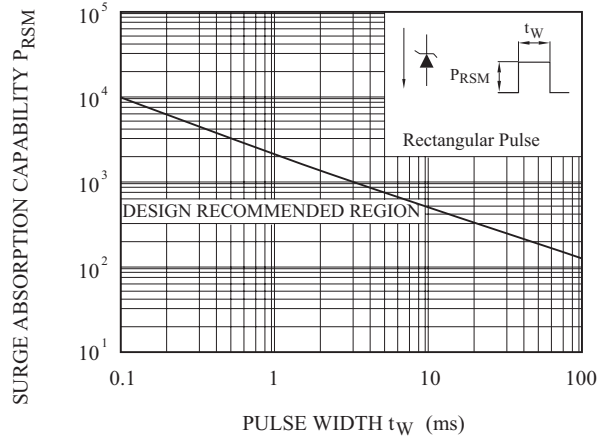
P -  $T_L, T_a$



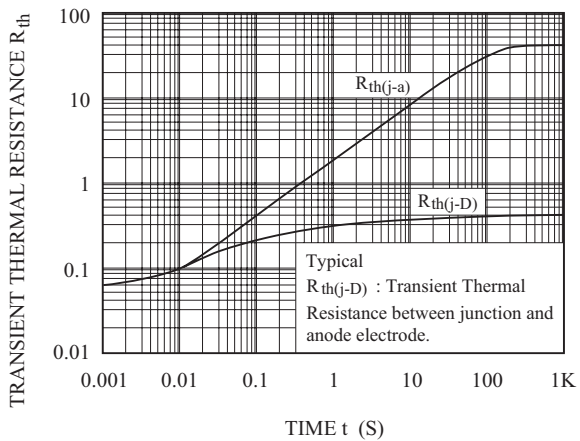
$I_Z - V_Z$



$P_{RSM} - t_W$



$R_{th} - t$



$I_F - V_F$

