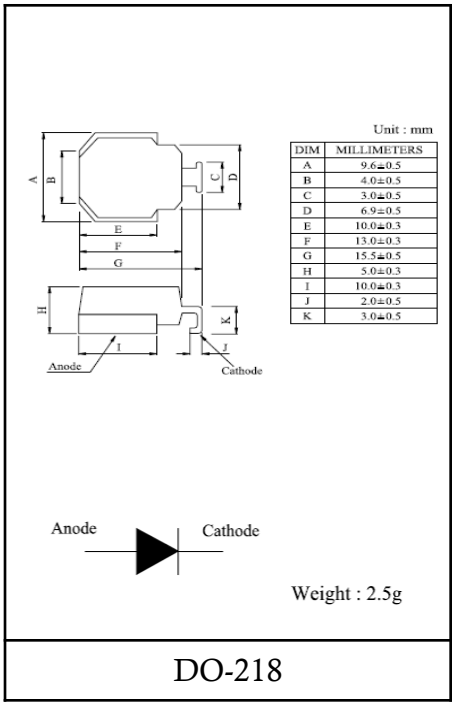
Z5W27VC

ZENER DIODE SILICON DIFFUSED-JUNCTION TYPE

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.



DO-218

FEATURES

- Excellent clamp voltage characteristics that protect electronic system from any kind of surge
- 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 (Tpeak=260℃)

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	Symbol	Rating	Unit
Allowable Power Dissipation(Note 1)	P	5	W
Peak Pulse Power Dissipation with 10/1,000㎲ wave form	P_{PPM}	3,600	W
Peak Pulse Power Dissipation with 10/10,000㎲ wave form	P_{PPM}	3,200	W
Non-Repetitive Peak Reverse Surge Current (See Fig1 for the exponents)	I_{RSM}	70	A
Junction Temperature	T_J	-55~175	℃
Storage Temperature Range	T_{STG}	-55~175	℃

Note 1 : Lead tip temperature T_L = 25℃.

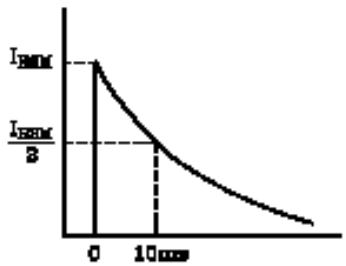
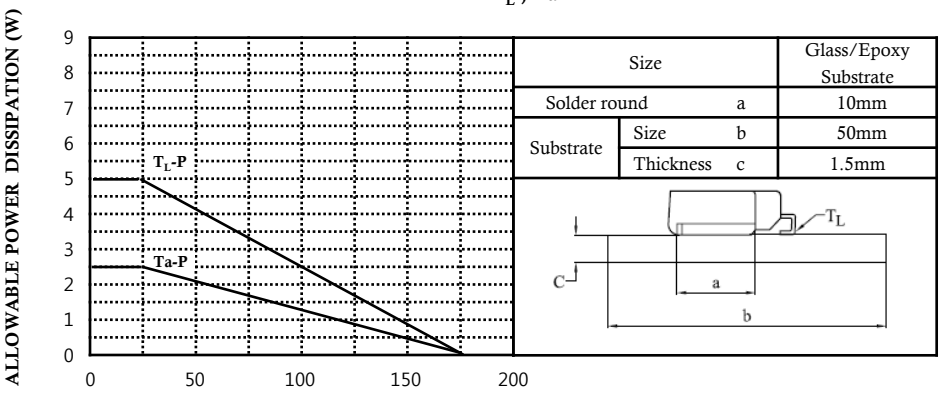


Fig1

ELECTRICAL CHARACTERISTICS (Ta=25℃)

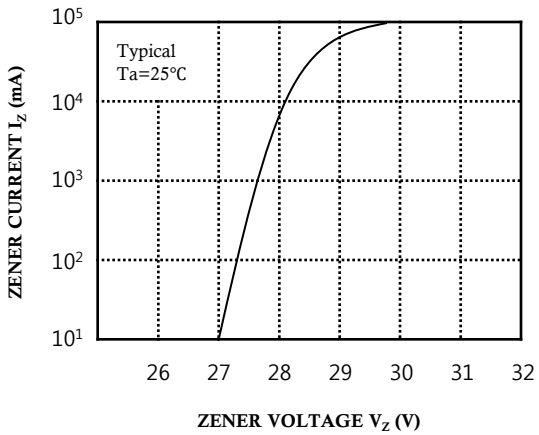
CHARACTERISTIC	Symbol	Test Condition	MIN	TYP	MAX	Unit
Zener Voltage	Vz	Iz=10㎃	24	27	30	V
Operating Resistance	r_d	Iz=10㎃	-	-	30	Ω
Temperature Coefficient	α_T	Iz=10㎃	-	23	36	㎷/℃
Forward Voltage	V_F	I_F=6A	-	-	1.0	V
		I_F=100A	-	-	1.2	
Reverse Current	I_R	V_R=22V	-	-	10	㎂
Clamping Voltage	V_C	I_{RSM}=55A	-	-	40	V

P - T_L , Ta



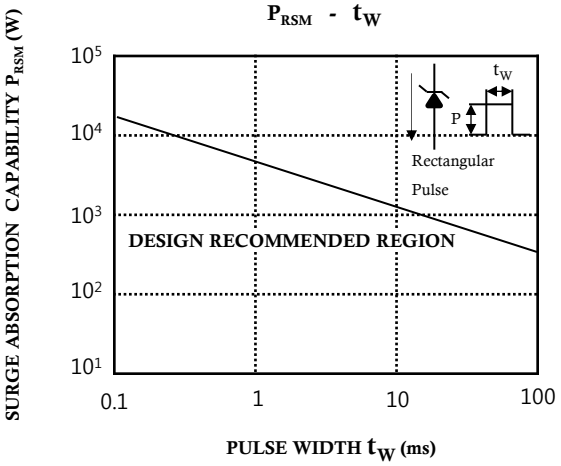
LEAD TEMPERATURE T_L , AMBIENT TEMPERATURE Ta (℃)

I_Z - V_Z



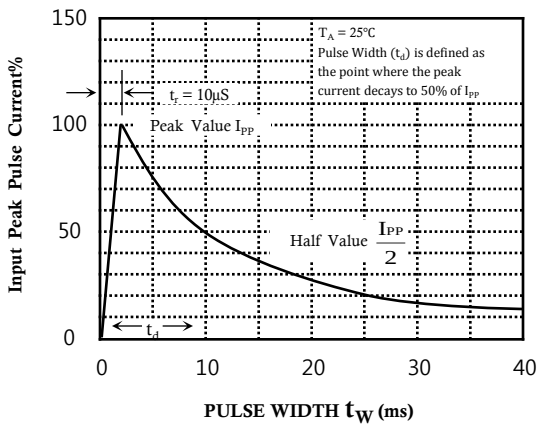
ZENER VOLTAGE V_Z (V)

P_{RSM} - t_W



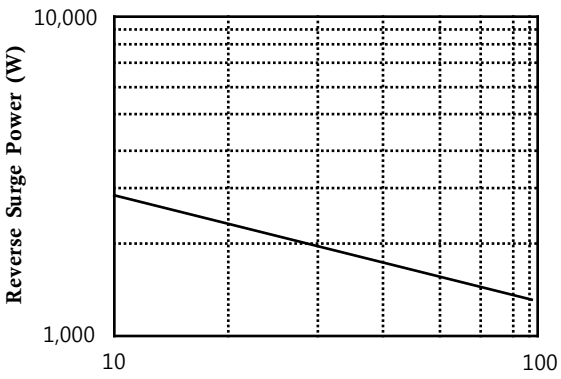
PULSE WIDTH t_W (ms)

Pulse Waveform



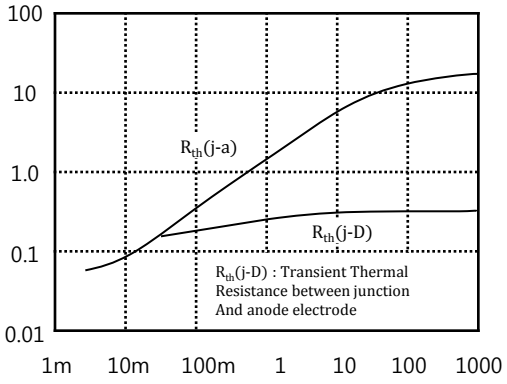
PULSE WIDTH t_W (ms)

Reverse Power Capability



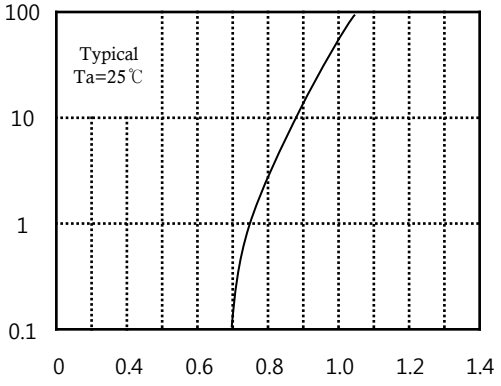
PULSE WIDTH t_W (ms) – 1/2 I_{PP} Exponential Waveform

Rth - t



TIMT t (S)

I_F - V_F



FORWARD VOLTAGE V_F (V)