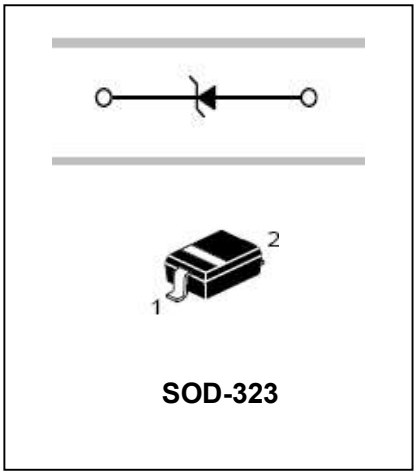
SD05/SD12

Single Line TVS Diode

RoHS COMPLIANT

FEATURES

- Suitable replacement for MLV'S
  ESD protection
- Low leakage current
- Low clamping voltage
- Working voltage:5V~12V



SOD-323

APPLICATIONS

- Single line TVS diode

ORDERING INFORMATION

Type No.	Marking	Package Code
SD05	5U	SOD-323
SD12	6U	SOD-323

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Parameter	**Symbol**	**Limits**	**Unit**
Peak pulse power dissipation(t_p=8/20μs)	P_{pk}	350	W
Peak pulse current(t_p=8/20μs)	I_{PP}	24	A
ESD Voltage (human Waveform per IEC 1000-4-2)	V_{PP}	30	kV
Lead soldering temperature	T_L	260(10 sec.)	℃
Junction temperature	T_j	-55 to+125	℃
Storage temperature	T_{STG}	-55 to+150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

SD05 TVS for 5V Lines

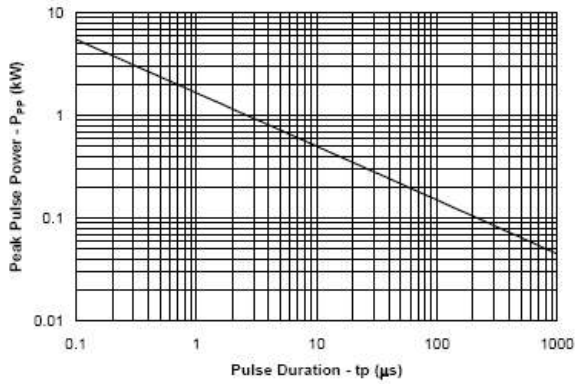
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse stand-off voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	I_t=1mA	6			V
Reverse leakage current	I_R	V_{RWM}=5V,T=25℃			10	μA
Clamping voltage	V_C	I_{PP}=5A,t_p=8/20μs			9.8	V
Clamping voltage	V_C	I_{PP}=24A,t_p=8/20μs			14.5	V
Junction capacitance	C_j	V_R=0V,f=1MHz			350	pF

SD12 TVS for 12V Lines

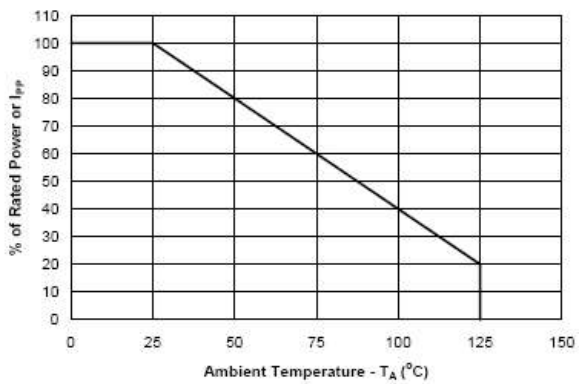
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse stand-off voltage	V_{RWM}				12	V
Reverse breakdown voltage	V_{BR}	I_t=1mA	13.3			V
Reverse leakage current	I_R	V_{RWM}=12V,T=25℃			1	μA
Clamping voltage	V_C	I_{PP}=5A,t_p=8/20μs			19	V
Clamping voltage	V_C	I_{PP}=15A,t_p=8/20μs			23	V
Junction capacitance	C_j	V_R=0V,f=1MHz			150	pF

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

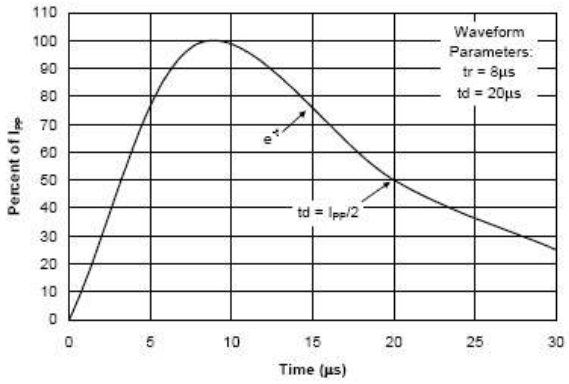


SD05/SD12

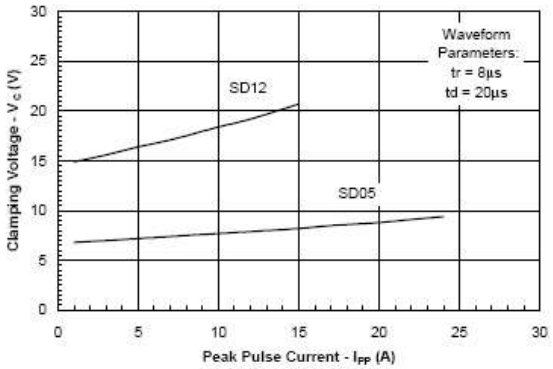
Single Line TVS Diode

RoHS COMPLIANT

Pulse Waveform

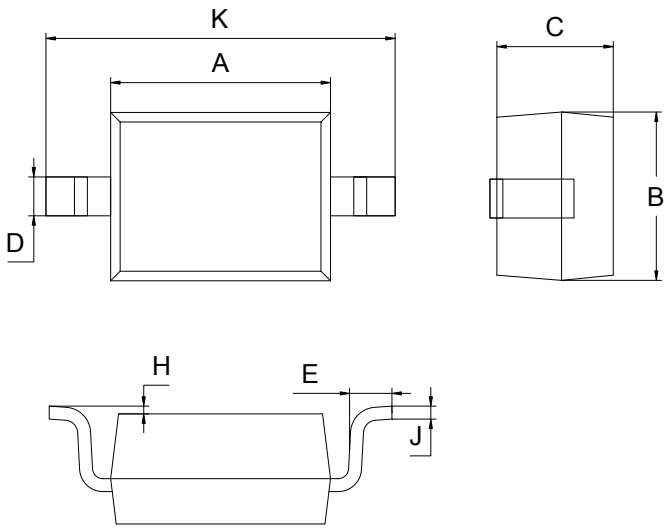


Typical Clamping Characteristic



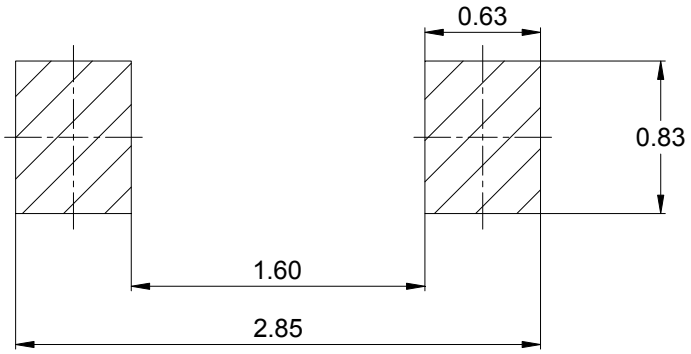
PACKAGE OUTLINE

Plastic surface mounted package SOD-323



SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.1
J	0.05	0.15
K	2.55	2.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit ： mm

PACKAGE INFORMATION

Device	Package	Shipping
SD05/SD12	SOD-323	3000/Tape&Reel