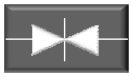
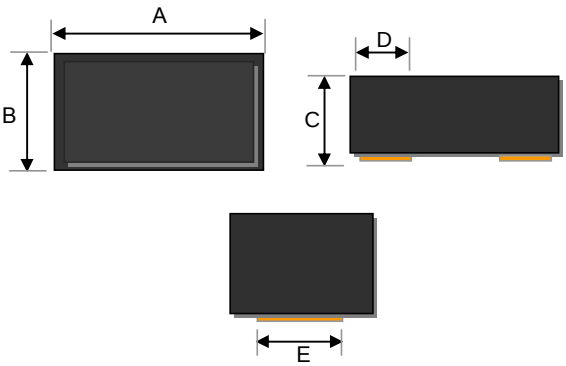
TAIWAN SEMICONDUCTOR

TESDL5V0 ~ TESDL24V
200mW,Bi-directional ESD Protection Diode

Small Signal Diode

1005





Features

- ✧Designed for mounting on small surface.
- ✧(16KV) ICE61000-4-2 rating.
- ✧Moisture sensitivity level 1
- ✧Working Voltage : 5V, 12V, 24V
- ✧Pb free version and RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

- ✧Case : 1005 standard package, molded plastic
- ✧Terminal: Gold plated,solder per MIL-STD-750, Method 2026 guaranteed
- ✧High temperature soldering guaranteed: 250°C/10s
- ✧Mounting position: Any
- ✧Weight : 0.006 gram (approximately)

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.40	2.60	0.095	0.102
B	1.10	1.30	0.043	0.051
C	0.70	0.90	0.027	0.035
D	Typ.	0.50	Typ.	0.020
E	Typ.	1.00	Typ.	0.040

Ordering Information

Part No.	Package	Packing
TESDLxxx RW	1005	4Kpcs / 7" Reel

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Maximum Power Dissipation	P_D	200	mW
Thermal Resistance (Junction to Ambient) (Note 1)	RθJA	500	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

Electrical Characteristics

Type Number			Symbol	Min	Max	Units
Reverse Breakdown Voltag	TESDL5V0	I_R= 1mA	$V_{(BR)}$	5.1	7	V
	TESDL12V			13	17	
	TESDL24V			25	28	
Reverse Leakage Current	TESDL5V0	V_R= 5V	I_R	0.1	2	uA
	TESDL12V	V_R= 12V				
	TESDL24V	V_R= 24V				
Clamping Voltage	TESDL5V0	I_{PP}= 5A	Vc	-	15	V
	TESDL12V	I_{PP}= 1A		-	25	
	TESDL24V	I_{PP}= 1A		-	47	
Peak Pulse Power	TESDL5V0	T_P=8/20us	P_{PP}	-	75	W
	TESDL12V			-	25	
	TESDL24V			-	7	
Junction Capacitance	TESDL5V0	V_R=0.5V, f=1.0MHz	C_J	15	20	pF
	TESDL12V			12	-	
	TESDL24V			10	-	

Notes:1. Valid provided that electrodes are kept at ambient temperature

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 8/20us Peak pulse current wave from acc.IEC 61000-4-5

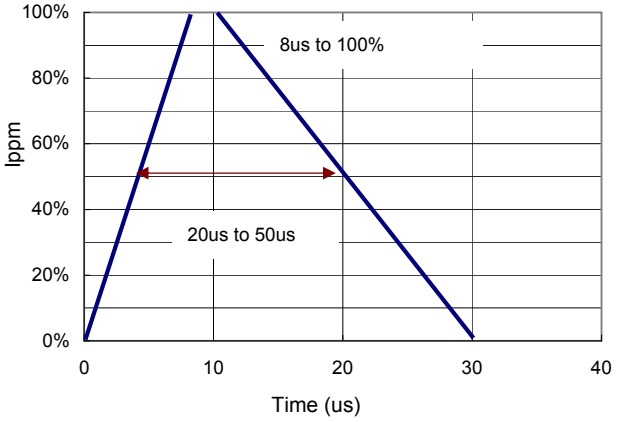


FIG 2 Reverse Characteristics

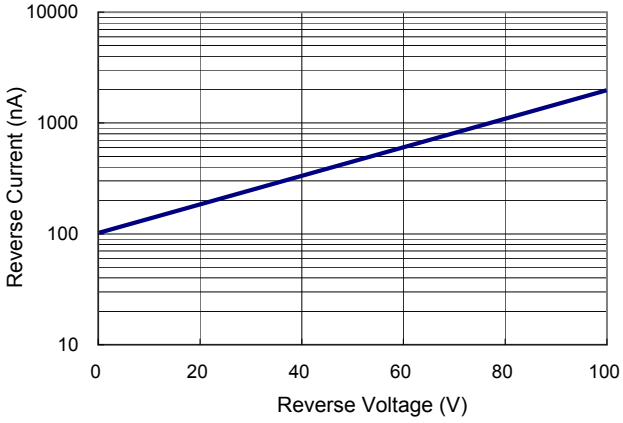


FIG 3 Capacitance between terminals characteristics

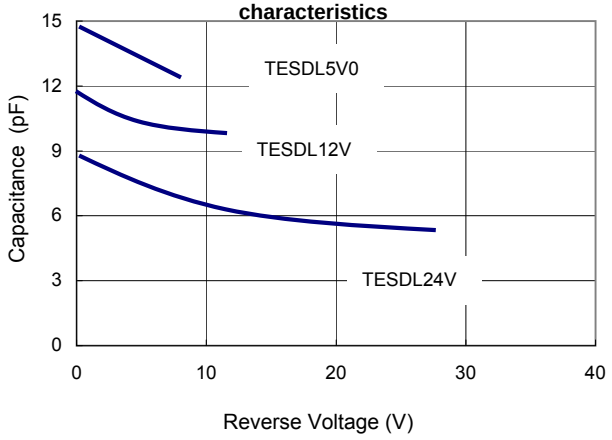


FIG 4 Power rating derating curve