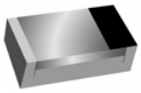
TAIWAN SEMICONDUCTOR

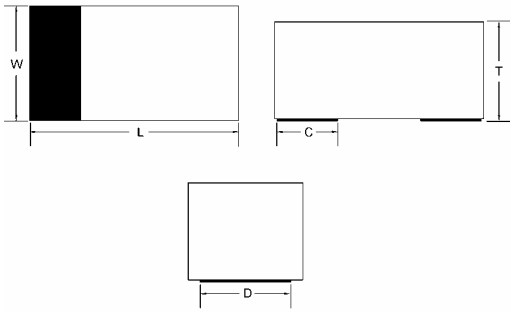
RoHS COMPLIANCE

TSS54U

0.2Amp Surface Mount Schottky Barrier Diode

0603





Features

- ✧ Designed for mounting on small surface
- ✧ Extremely thin/leadless package
- ✧ Low capacitance
- ✧ Low forward voltage drop
- ✧ High temperature soldering: 260°C/10 seconds at terminals
- ✧ Chip version in 0603

Mechanical Data

- ✧ Case: 0603 Standard package, molded plastic
- ✧ Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- ✧ Polarity: Indicated by cathode band
- ✧ Mounting position: Any
- ✧ Package code: RZ
- ✧ Weight: 0.003 gram (approximately)

ITEM	0603
L	0.071(1.80) 0.063(1.60)
W	0.039(1.00) 0.031(0.80)
T	0.033(0.85) 0.027(0.70)
C	0.018(0.45) Typical
D	0.028(0.70) Typical

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	0603	Units
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
DC Reverse Voltage	V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Forward Current	I_O	200	mA
Repetiitive Peak Forward Current	I_{FRM}	300	mA
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	600	mA
Power Dissipation	Pd	150	mW
Forward Voltage IF=0.1mA IF=1mA IF=10mA IF=30mA IF=100mA	V_F	0.24 0.32 0.4 0.5 1.0	V
Reverse Leakage Current VR=25V	I_R	2	uA
Typical capacitance between terminals VR=1V, f =1.0MHz reverse voltage	C_J	10	pF
Reverse Recovery Time (IF=IR=10mA, Irr=0.1 x IR, RL=100Ω)	Trr	5	nS
Junction Temperature	T_J	-65 to + 125	°C
Storage Temperature	T_{STG}	-65 to + 125	°C

Version: A07

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RATINGS AND CHARACTERISTIC CURVES(TSS54U)

Fig. 1 - Forward characteristics

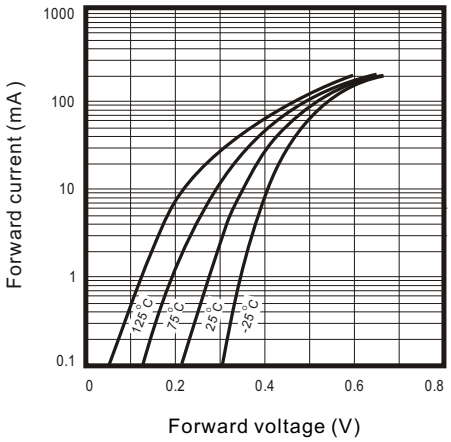

Fig. 2 - Reverse characteristics

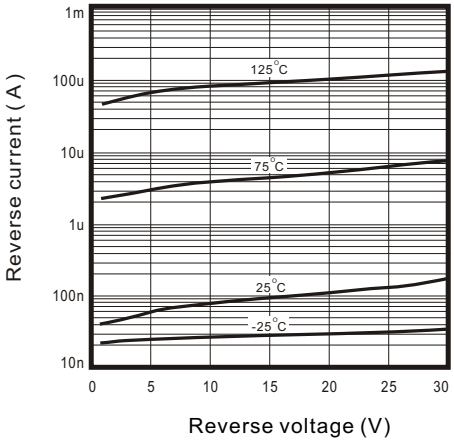

Fig.3 - Capacitance between terminals characteristics

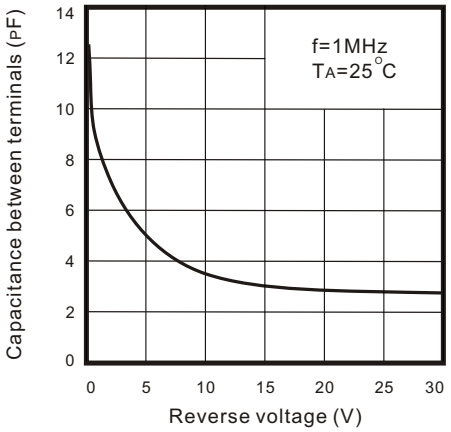

Fig.4 - Current derating curve