

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

www.msksemi.com

FEATURES

- Protects I/O lines etc.
- Low Clamping Voltage
- Low leakage current
- Solid-state silicon-avalanche technology
- High Polymer Material for faster response time
- Response Time is Typically <0.5 ns
- ROHS compliant in Lead-Free versions

APPLICATIONS

- Notebooks and PC peripheral accessories
- Digital consumer electronics, MID, Bluetooth and Wi-Fi equipment
- Household Audio, Car Stereo
- Monitors and Flat Panel Displays
- Set Top BOX and OTT Box, DVBT
- Networking and Telecom equipment, such as cellphone, Net Switch, Router
- Medical Electronic such as Sphygmomanometer, Blood Glucose Meter
- Security equipment such as CCTV Camera, DVR,NCR, Optical Transceiver
- Industrial Equipment

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)
±15kV (air), ±8kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20ns)

ELECTRICAL CHARACTERISTICS

(TA=25°C Unless otherwise noted)

P/N	Working Voltage (V _{DC})	Trigger Voltage(V _V) 0V _V =±30%	Clamping Voltage (V _c)	Capacitance (C _p)	Capacitance Tolerance (ΔC _p)	Leakage Current (I _L)
BTR06D3-MS	3V	10V	8V	2.5PF	±1.5pF	<1nA

ELECTRICAL PARAMETERS (T=25°C)

Symbol	Parameter
V _{DC}	Maximum DC Operating Voltage
V _V	In the case of electrostatic discharge, V _V is the turn-on voltage of ESD suppressor instant grounding
V _C	Per IEC61000-4-2,level 4 waveform(8KV contact discharge mode,30A), measurement made 30ns after initiation of pulse
C _P	capacitance measurement at 1MHz test frequency
V _{BR}	Breakdown Voltage
I _L	Leakage Current

ABSOLUTE MAXIMUM RATINGS

 (T_A=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Peak Pulse Power (t _p = 8/20 μs)	P _{pk}	180	W
Operating Junction Temperature	T _J	-55 ~ 125	°C
Storage Temperature Range	T _{STG}	-55 ~ 150	°C
Lead Soldering Temperature	T _L	260 (10sec)	°C

ENVIRONMENTAL SPECIFICATIONS

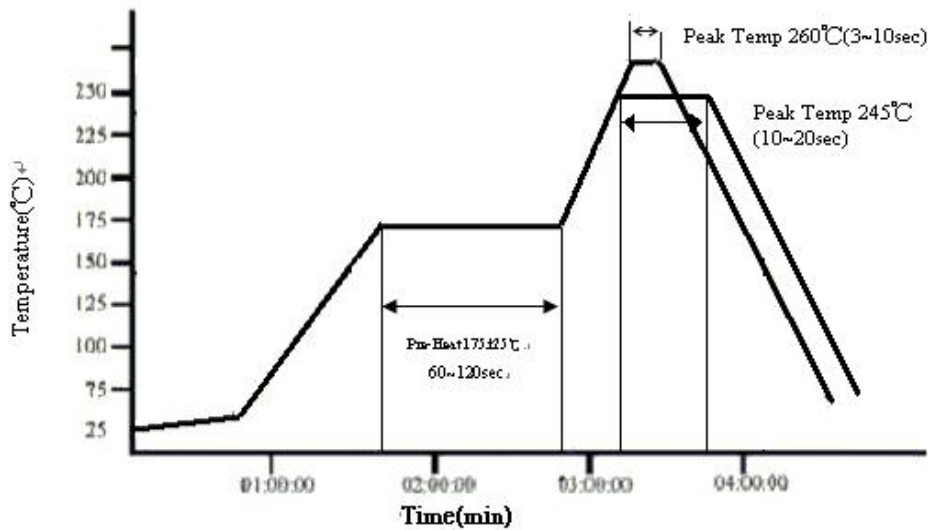
Characteristics	Specifications	Test Condition
Bias humidity	ΔV _v N _v ≤ ± 10%	90%RH,40 °C,Working voltage,1000 hours
Thermal shock		-40 °C to 85 °C,30 min. cycle,5 cycles
Full load voltage		Working voltage,85 °C,1000hours
Solder leach resistance	1.0V _v N _v ≤ ± 10% 2.I _r ≤ 50mA at working voltage 3.Solder Wetting area ≥ 95%	260 °C,10s

PACKAGE MECHANICAL DATA

Dimension	Unit: Millimeters	
	Min.	Max.
A	0.9	1.2
B	2.7	3.2
C	0.7	1.0
D	0.9	1.2

0603

The IR reflow and temperature of Soldering for Pb Free



☆ IR reflow Pb Free Process suggestion profile

- (1) The solder recommend is Sn96.5/Ag 3.5 of 120 to 150 μm
- (2) Ramp-up rate (217°C to Peak) + 3°C/second max
- (3) Temp. maintain at 175 +/-25°C 180 seconds max
- (4) Temp. maintain above 217 °C 60-150 seconds

REEL SPECIFICATION

P/N	PKG	QTY
BTR06D3-MS	0603	4000

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