

L30ESD5V0AC3-2

ESD PROTECTION DEVICE

**STAND-OFF VOLTAGE – 5.0 Volts
POWER DISSIPATION - 300 Watts**

FEATURES

- 2 Unidirectional ESD protection.
- Max. peak pulse power : $P_{pp} = 300W$ at $t_p = 8/20$ us
- ESD protection > 25KV per per MIL-STD-883C, Method 3015-6; Class 3
- IEC 61000-4-2, level 4 (ESD), $\geq \pm 15KV$ (air) ; $\geq \pm 8KV$ (contact) .
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

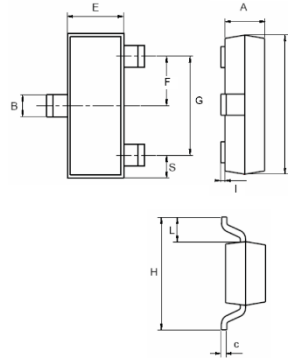
MECHANICAL DATA

- Package material: "Green" molding compound UL flammability classification 94V-0 (No Br, Sb, Cl)
- Terminals: Lead Free Plating (Matte Tin Finish)
- Component in accordance to RoHS 2011/65/EU

APPLICATION

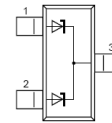
- Computers and peripherals
- Communication system
- Portable electronic high speed data line
- Cellular handsets and accessories

SOT23



SOT-23		
DIM.	MIN.	MAX.
A	0.89	1.05
B	0.30	0.51
C	0.085	0.18
D	2.75	3.04
E	1.20	1.60
F	0.85	1.05
G	1.70	2.10
H	2.10	2.75
I	0.0	0.1
L	0.60 typ.	
S	0.35	0.65

All Dimensions in millimeter



PIN ASSIGNMENT	
1	Anode
2	Anode
3	Cathode

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power ($t_p = 8/20$ us)	P_{PK}	300	W
Peak pulse current ($t_p = 8/20$ us)	I_{PP}	15	A
Operating junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C
Soldering temperature, $t_{max} = 10s$	T_L	260	°C

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX	UNIT
Reverse stand-off voltage	V_{RWM}	--	--	--	5.0	V
Breakdown voltage	V_{BR}	$I_R = 1$ mA	6.4	--	7.2	V
Reverse leakage current	I_{RM}	$V_{DRM} = 5$ V	--	--	1	uA
Junction capacitance	C_J	$V_R = 0V, f = 1MHz$	--	157	160	pF
Clamping voltage	V_C	$I_{PP} = 15A, t_p = 8/20$ uS	--	--	20	V

Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

**RATING AND CHARACTERISTIC CURVES
L30ESD5V0AC3-2**

FIG.1- 8/20us pulse waveform according to IEC 61000-4-5

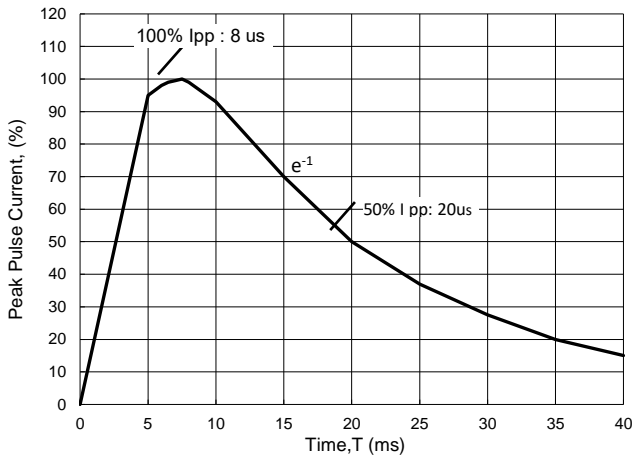


FIG.2- ESD pulse waveform according to IEC 61000-4-2

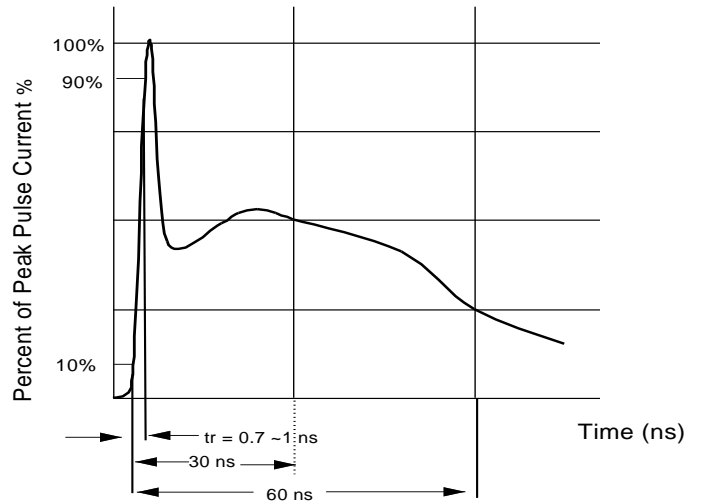


FIG.3- Power Dissipation Versus Pulse Time

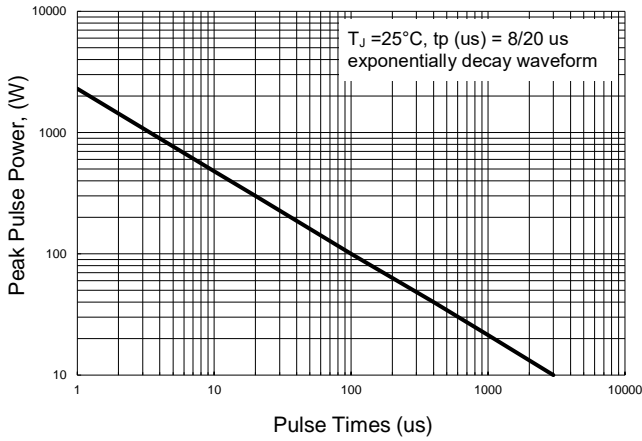


FIG.4- Peak Pulse Power Versus Tj

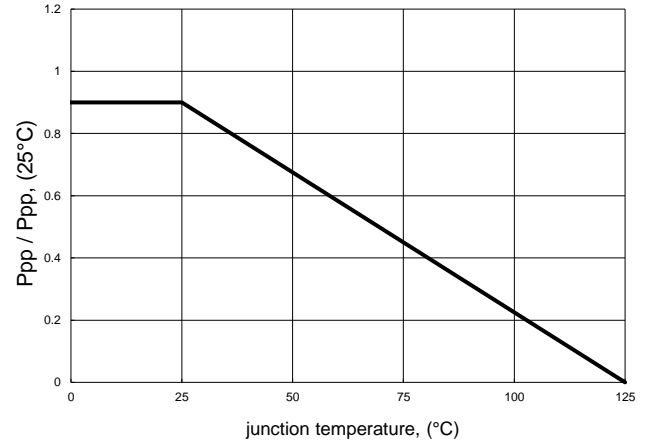


Figure 5. Typical Junction Capacitance

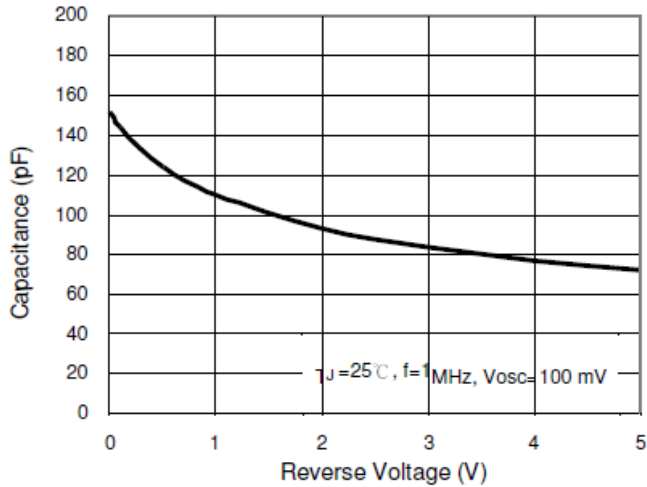
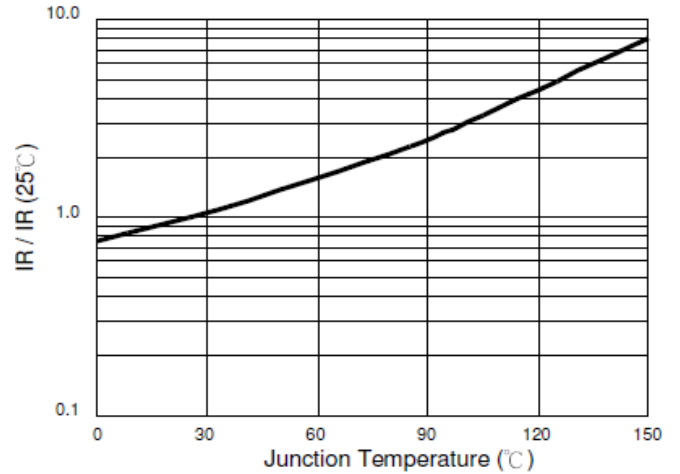


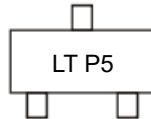
Figure 6. Reverse Leakage Current versus Tj



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
L30ESD5V0AC3-2	SOT23	3000pcs	Reel

Marking Information :

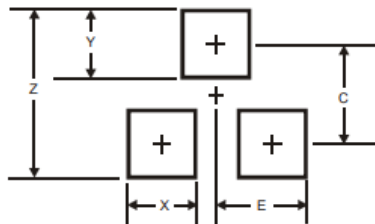


LTP5 = Product Type Marking Code

Packaging Information :

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
L30ESD5V0AC3-2	3000	7	45000	180K

Suggested Pad Layout :



Dimensions	Value (in mm)
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

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