Features

- Low Capacitance
- Low Operating Voltage
- Low Clamping Voltage
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

ESD Protection Device

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

MCC Part Number	Device Marking
ESDLC0504P3	53M

DP, DM, USB ID (Pins 1, 2, 3)

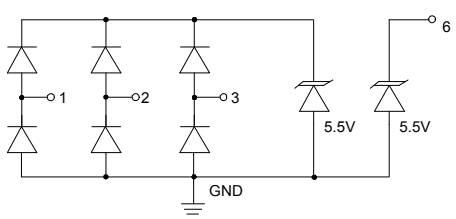
IEC61000-4-2(ESD)	Air Contact	±25KV ±20KV
IEC61000−4−4 (EFT) @5/50ns		40A
Peak Pulse Current(8/20μs)	I_{PP}	5A
Peak Pulse Power (8/20μs)	P_{PK}	60W

VBus (Pin 6)

IEC61000-4-2(ESD)	Air	±25KV
IEC61000−4−4 (EFT) @5/50ns		40A
Peak Pulse Current(8/20μs)	I_{PP}	6A
Peak Pulse Power (8/20μs)	P_{PK}	75W

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Circuit and Pin Schematic



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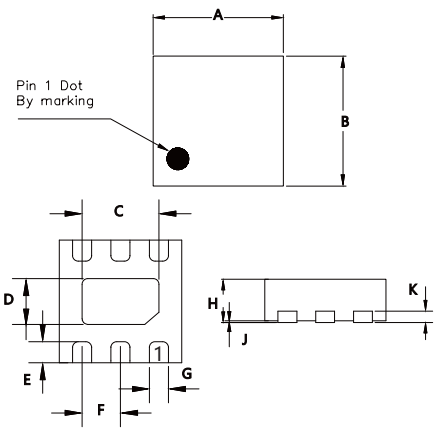
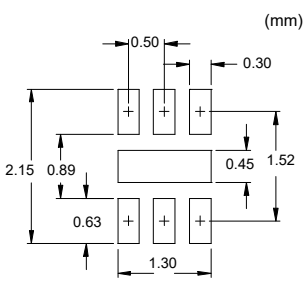


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.061	0.065	1.55	1.65	
B	0.061	0.065	1.55	1.65	
C	0.035	0.051	0.90	1.30	
D	0.020	0.026	0.50	0.65	
E	0.008	0.016	0.20	0.40	
F	0.020		0.50		TYP.
G	0.008	0.012	0.20	0.30	
H	0.018	0.024	0.45	0.60	
J	0.000	0.002	0.00	0.05	
K	0.006		0.15		TYP.

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}	Pin 1, 2, or 3 to Ground			5.5	V
Reverse Breakdown Voltage	V_{BR}	I_T = 1mA,Pin 6 to Pround	6.5			V
Reverse Leakage Current	I_R	V_{RWM} =5V,Pin 6 to Ground			0.5	μA
Clamping Voltage	V_C	I_{PP}=1A, t_P=8/20μs, Any I/O Pin to Ground			9.5	V
Clamping Voltage	V_C	I_{PP}=5A, t_P=8/20μs, Any I/O Pin to Ground			12	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz, Between Any I/O Pins			0.4	pF
Junction Capacitance	C_J	V_R = 0V, f = 1MHz, Any I/O Pin to Ground			0.8	pF
VBus TVS						
Reverse Working Voltage	V_{RWM}	Pin 6 to Ground			5.5	V
Reverse Breakdown Voltage	V_{BR}	I_T = 1mA,Pin 6 to Ground	6	7	9	V
Reverse Leakage Current	I_R	V_{RWM} =5.5V,Pin 6 to Ground			3	μA
Clamping Voltage	V_C	I_{PP}=1A, t_P=8/20μs, Pin 6 to Ground			8	V
Clamping Voltage	V_C	I_{PP}=6A, t_P=8/20μs, Pin 6 to Ground			12.5	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz, Pin 6 to Ground			60	pF

Curve Characteristics

Fig. 1 - 8 X 20μs Pulse Waveform

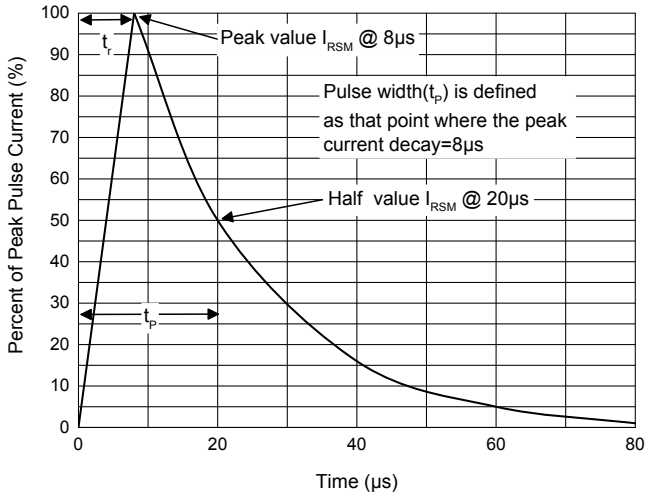


Fig. 2 - Pulse Derating Curve

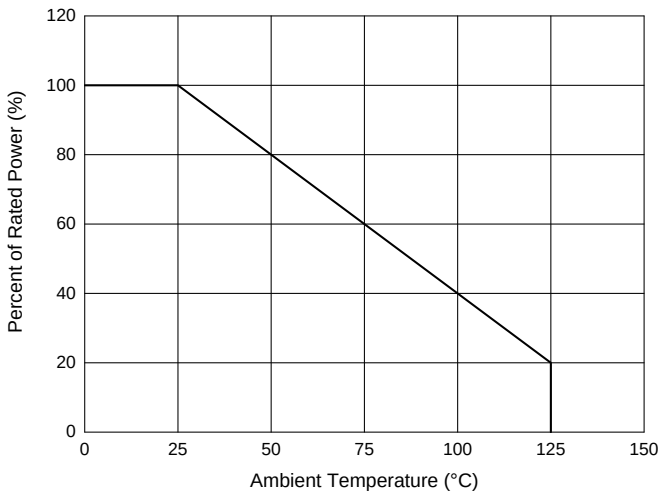


Fig. 3 - Capacitance Characteristics

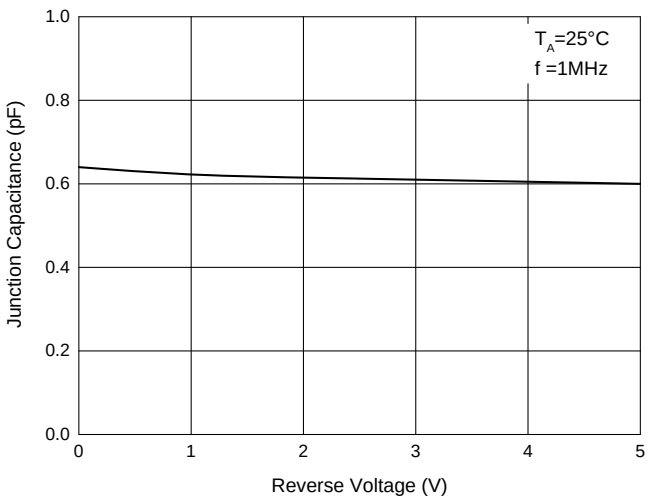
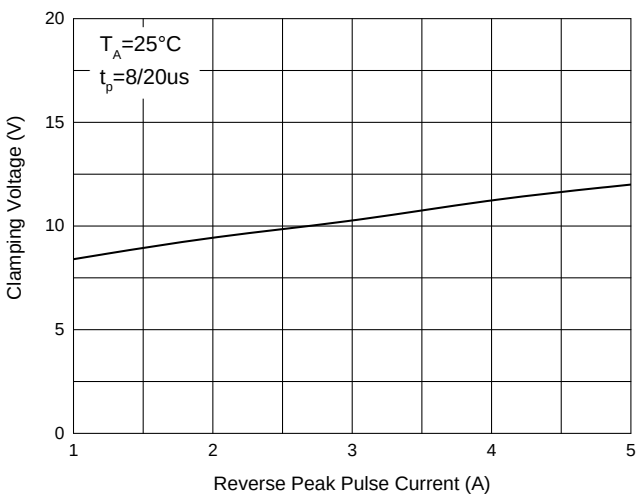


Fig. 4 - Clamping Voltage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel