

**Features**

- Small Package Saves Board Space
- Protects Four(4) I/O Lines
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

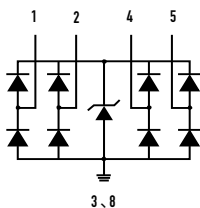
**Maximum Ratings**

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

MCC Part Number	Device Marking
ESDSL0524F	0524F

IEC61000-4-2(ESD)	Air Contact	±25KV ±20KV
IEC61000-4-5(Surge)@8/20us	I <sub>PP</sub>	5A
Peak Pulse Power(tp=8/20us)	P <sub>PP</sub>	150W

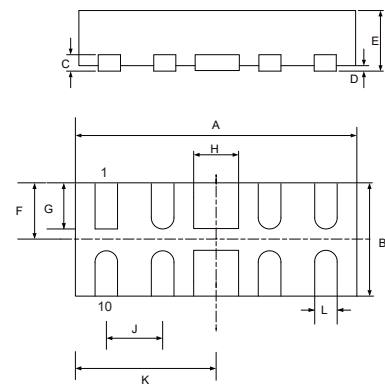
**Pin Configuration**



Pin	Identification
1,2,4,5	Input lines
6,7,9,10	Output Lines (No Internal Connection)
3,8	Ground

**ESD Protection Device**

**DFN-10**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.094	0.102	2.40	2.60	
B	0.035	0.043	0.90	1.10	
C	0.005		0.13		TYP.
D	0.000	0.002	0.00	0.05	
E	0.020	0.026	0.50	0.65	
F	0.017	0.022	0.45	0.55	
G	0.012	0.017	0.30	0.425	
H	0.014	0.018	0.35	0.45	
J	.020		0.5		TYP.
K	0.047	0.056	1.20	1.30	
L	0.006	0.010	0.15	0.25	

**Electrical Characteristics per line @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse stand-off Voltage	$V_{RWM}$	Any I/O Pin to GND			5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t=1mA$ , Any I/O Pin to GND	6.1		9.6	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V$ , Any I/O Pin to GND			0.9	$\mu A$
Forward Voltage	$V_F$	$I_F=15mA$ , GND to any I/O Pins			1.15	V
Clamping Voltage	$V_C$	$I_{PP}=1A$ , $t_p=8/20\mu s$			15	V
Junction Capacitance	$C_{I/O-GND}$ $C_{I/O-I/O}$	$V_{PIN1,2,4,5}=5V$ , $V_{PIN3,8}=0V, f = 1MHz$		0.6 0.3	0.8 0.4	pF

## Curve Characteristics

Fig. 1 - 8 X 20 $\mu$ s Pulse Waveform

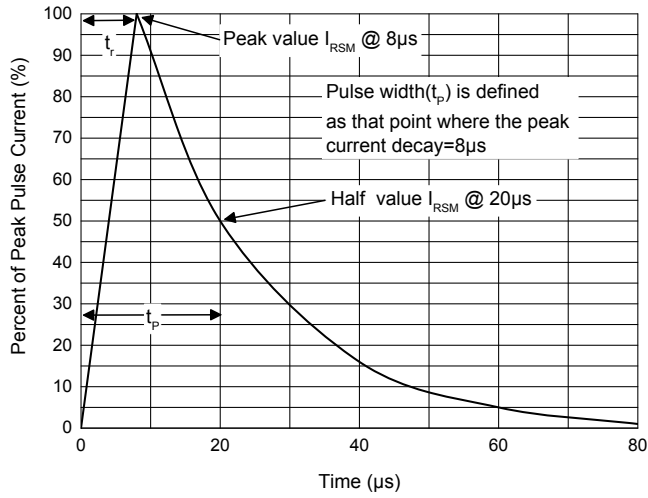


Fig. 2 - Pulse Derating Curve

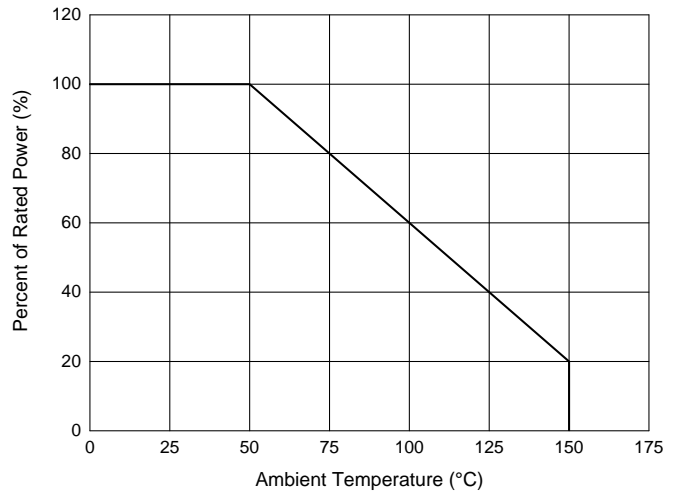


Fig. 3 - Capacitance Characteristics

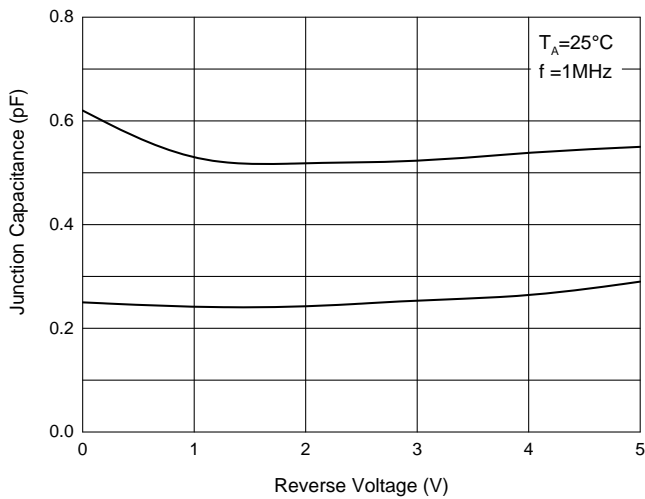
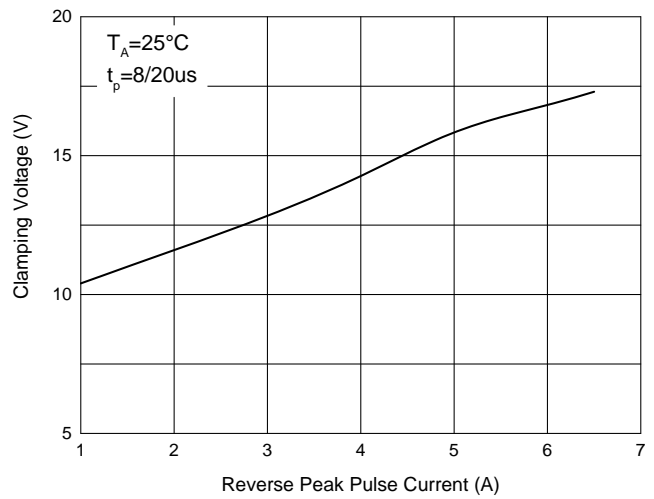


Fig. 4 - Clamping Voltage Characteristics



## Ordering Information

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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