

Features

- AECQ-101 Qualified with Wettable Flank
- Low Capacitance
- Low Clamping Voltage
- Ultra Low Leakage Current
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

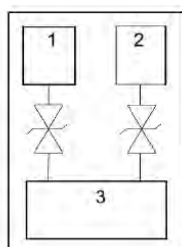
Maximum Ratings

IEC61000-4-2 (ESD)	Air	±30KV
	Contact	±30KV
Peak Pulse Current (8/20μs)	I _{PP}	5A
Peak Pulse Power (8/20μs) ^(Note2)	P _{PK}	170W
Operating Junction Temperature Range	T _J	-55°C to +125°C
Storage Temperature Range	T _{STG}	-55°C to +150°C

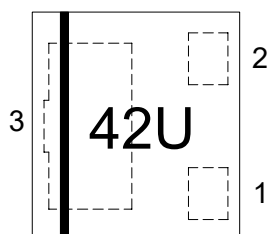
Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

Internal Structure

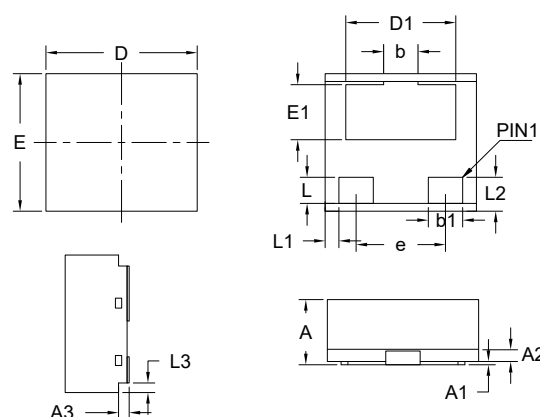


Marking Code



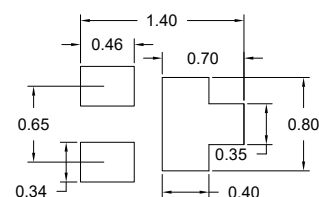
Snap Back ESD Protection Device

DFN1110-3(SWF)

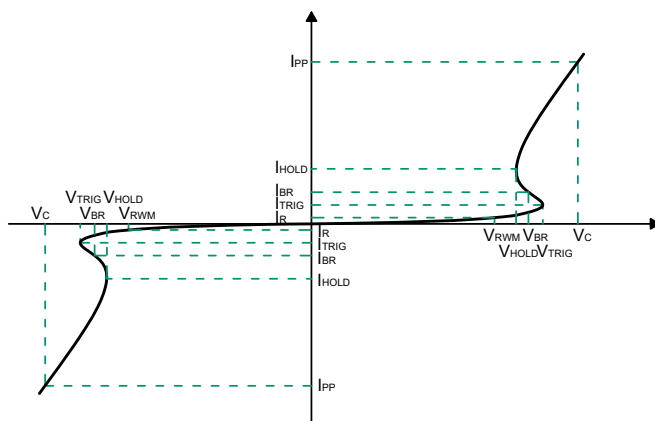


DIMENSIONS					
	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.016	0.020	0.400	0.500	
A1	0.000	0.002	0.000	0.050	
A2	0.004		0.100		MIN
A3	0.005		0.127		MIN
D	0.041	0.045	1.050	1.150	
E	0.037	0.041	0.950	1.050	
D1	0.030	0.033	0.750	0.850	
E1	0.014	0.018	0.350	0.450	
b	0.008	0.012	0.200	0.300	
b1	0.008	0.012	0.200	0.300	
e	0.024	0.028	0.600	0.700	
L	0.006	0.009	0.140	0.240	
L1	0.004		0.100		TYP
L2	0.008	0.012	0.210	0.310	
L3	0.000	0.003	0.000	0.070	

SUGGESTED SOLDER PAD LAYOUT (mm)



Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{TRIG}	Reverse Trigger Voltage
I_{TRIG}	Reverse Trigger Current
V_{HOLD}	Reverse Holding Voltage
I_{HOLD}	Reverse Holding Current
C_J	Junction Capacitance



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Working Voltage	V_{RWM}				24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	26.5			V
Reverse Leakage Current	I_R	$V_{RWM}=24V$			0.2	μA
Clamping Voltage ^{Note1}	V_C	$I_{PP}=1A, t_p=8/20\mu s$			34	V
Clamping Voltage ^{Note1}	V_C	$I_{PP}=5A, t_p=8/20\mu s$			34	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		5		pF
Dynamic Resistance ^{Note2}	R_{DYN}	TLP, $t_p=100ns$		0.57		Ω

Note :

1.Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

2.TLP parameter: $Z_0=50\Omega$, $t_p=100ns$, $t_r=2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

Curve Characteristics

Fig. 1 - 8 X 20 μ s Pulse Waveform

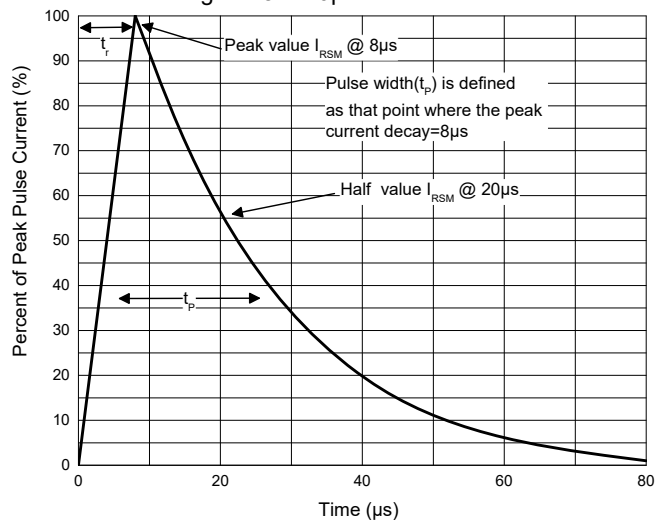


Fig. 2 - Non-Repetitive Peak Pulse Power

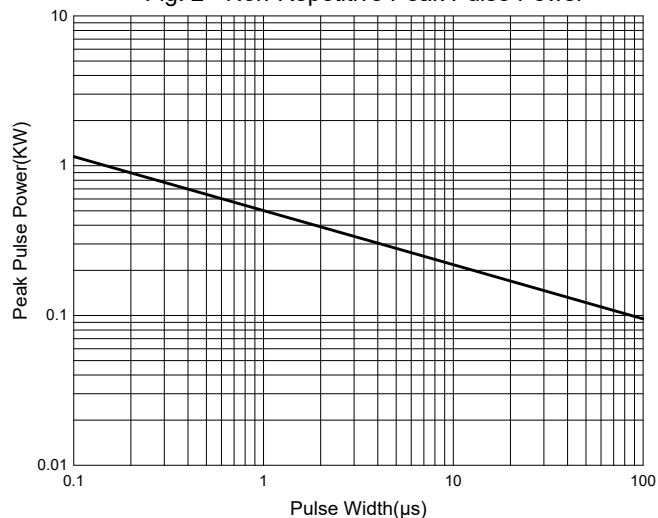


Fig. 3 - Capacitance Characteristics

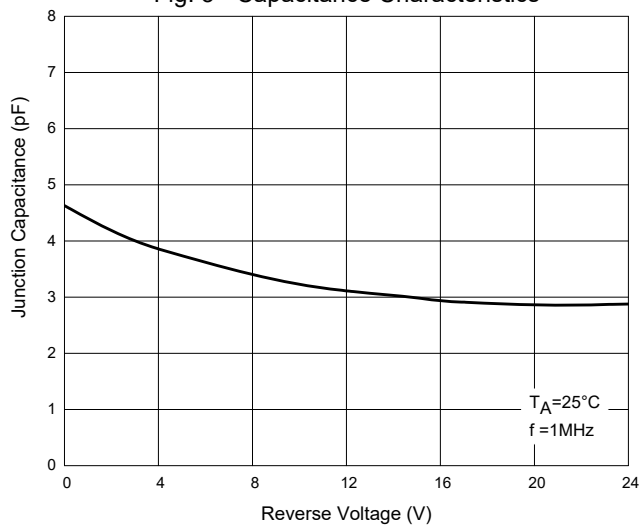


Fig. 4 - Clamping Voltage Characteristics

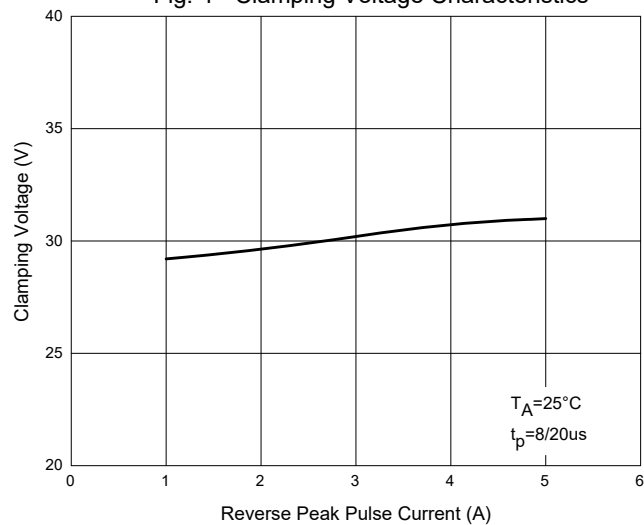


Fig. 5 - TLP Curve

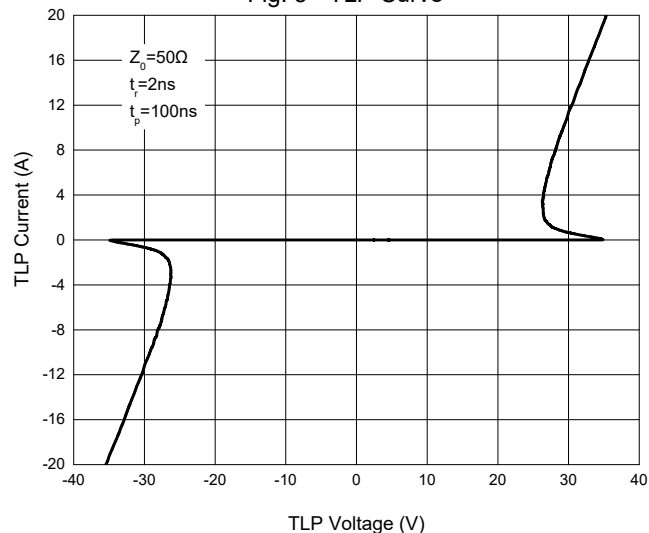
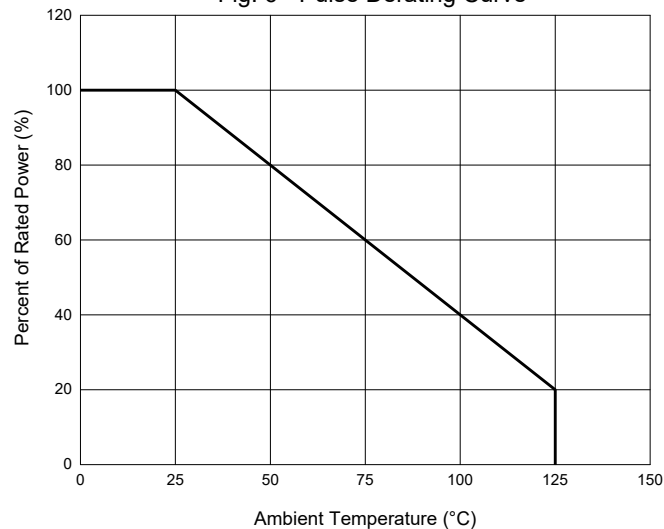


Fig. 6 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

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