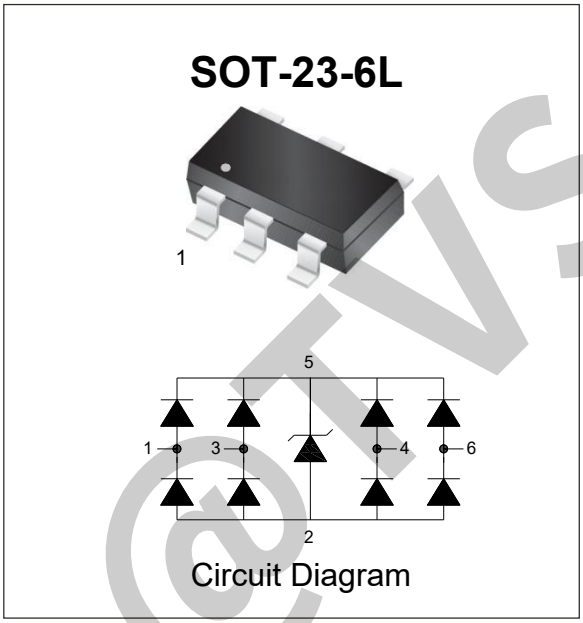
DCE05T26A06LCU

ESD Protection Diode Array with Low Capacitance

Features

- IEC 61000-4-2 Level 4 ESD Protection
- ±20kV Contact / ±20kV Air Discharge
- 78W Peak Pulse Power (8/20μs)
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- RoHS compliant
- Protects four Uni-directional lines
- Capacitance: 0.5pF Typ.



Mechanical Data

- Package: SOT-23-6L
- 4-channel unidirectional ESD array
- Pin Configuration: 1/2/3/4=I/O, 5=GND, 6=VCC
- Low capacitance: 0.5pF (I/O-GND), 0.25pF (I/O-I/O)

Applications

- MP3 Players
- Battery Protection
- Vbat pin for Mobile Device
- Mobile Phones
- Power Line Protection
- Hand Held Portable Applications

Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
DCE05T26A06LCU	-	SOT-23-6L	Tape and reel	3000pcs / reel	EIA STD RS-481

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

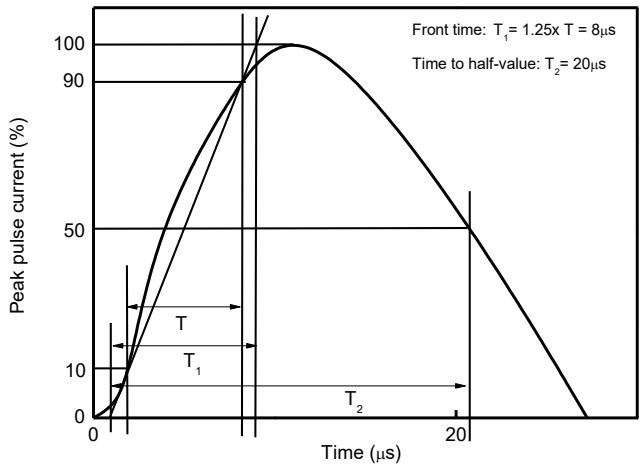
Parameter	Symbol	Value	Unit
Peak Pulse Power (T_P=8/20μs)	P_{PP}	78	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	±20/±20	kV
Peak Pulse Current (T_P = 8/20μs)	I_{PP}	6	A
Junction Temperature	T_J	125	℃
Operation temperature	T_{OP}	-40 to 85	℃
Lead temperature	T_L	260	℃
Storage temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics

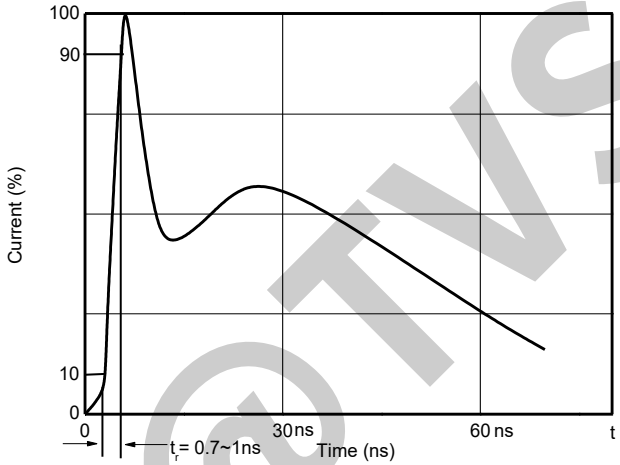
(T_A = 25 °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}		-	-	5	V
Holding Voltage	V_{BR}	IT = 1mA	5.5	-	-	V
Reverse Leakage Current	I_R	VRWM = 5V	-	-	0.1	uA
Clamping Voltage	V_C	IPP = 1A,tp=8/20 μ s	-	8.5	10	V
Clamping Voltage	V_C	IPP = 6A,tp=8/20 μ s	-	11	13	V
Junction Capacitance	C_J	V_R=0V, f=1MHz	-	0.5	0.65	pF
Junction Capacitance	C_J	VR=0V, f=1MHz; I/O-I/O	-	0.25	0.35	pF

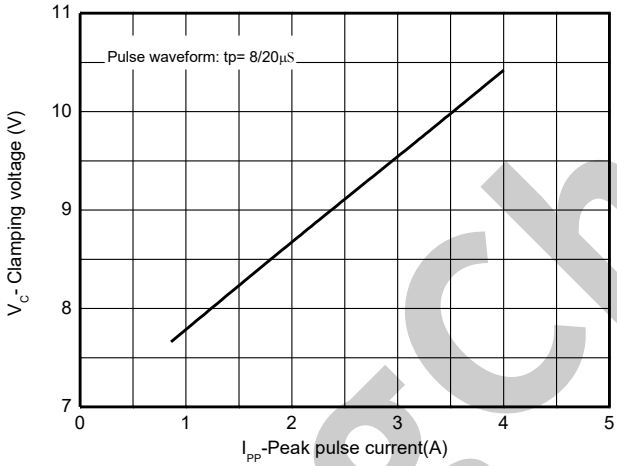
Typical Characteristic



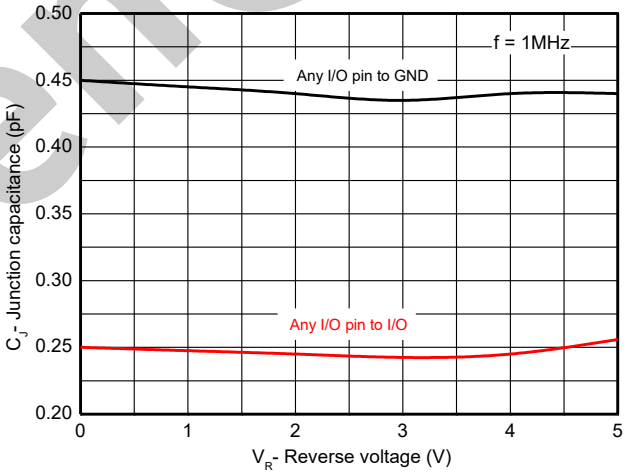
8/20μs waveform per IEC61000-4-5



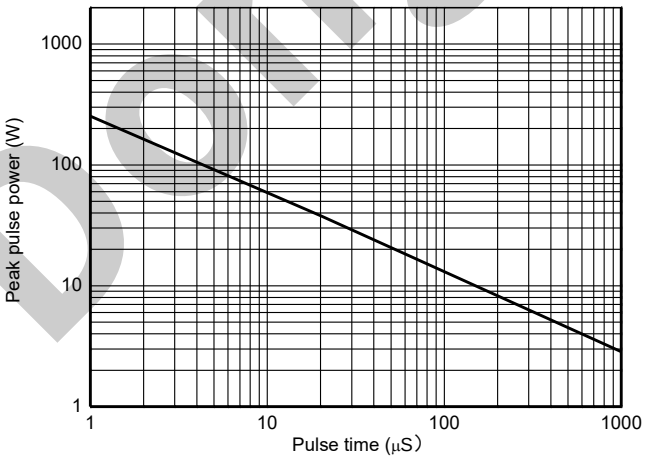
Contact discharge current waveform per IEC61000-4-2



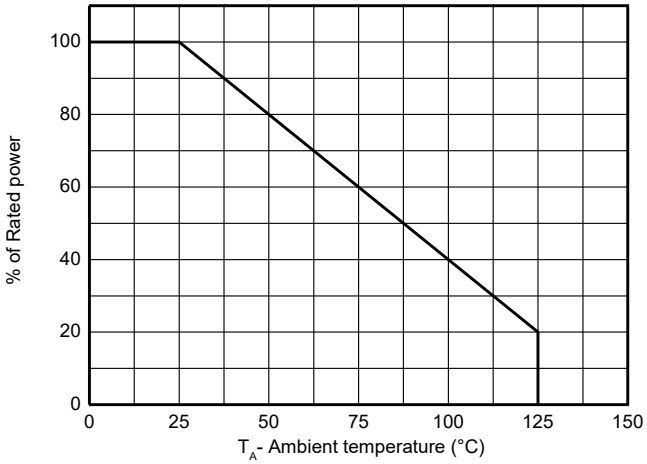
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

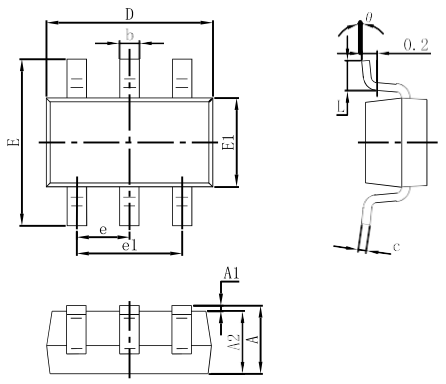


Non-repetitive peak pulse power vs. Pulse time



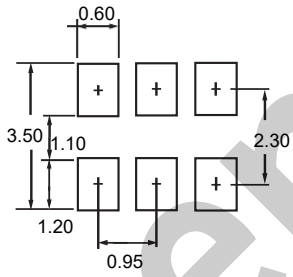
Power derating vs. Ambient temperature

Package Dimensions



Symbol	Dimensions in millimeters	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E1	1.500	1.700
E	2.650	2.950
e	0.950(BSC)	
e1	1.800	2.000
L	0.300	0.600
θ	0°	8°

Pad dimensions



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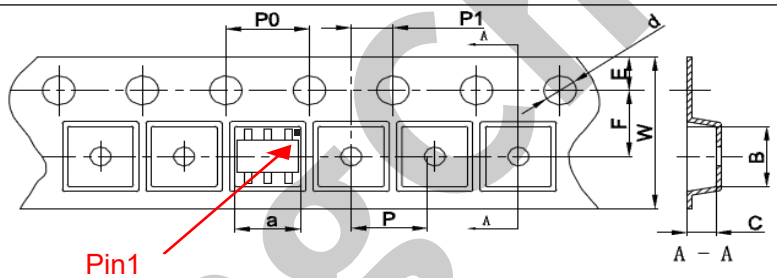

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOT-23-6	3.17	3.23	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

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