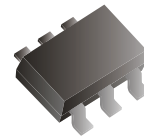


CDBV6-54T/AD/CD/SD/BR-G

Forward Current: 0.2A

Reverse Voltage: 30V

RoHS Device

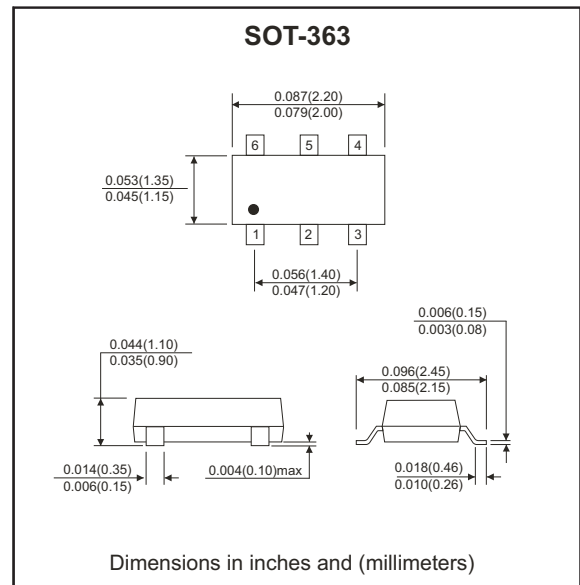


Features

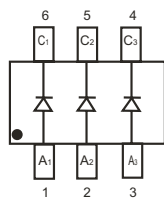
- Low forward voltage drop.
- Fast switching.
- Ultra-small surface mount package.
- PN junction guard ring for transient and ESD protection.
- Available in lead Free version.

Mechanical data

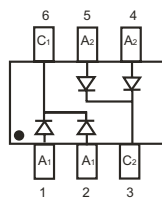
- Case: SOT-363, Molded Plastic
- Case material: UL 94V-0 flammability retardant classification.
- Terminals: Solderable per MIL-STD-202, Method 208
- Marking: Orientation: See diagrams below
- Weight: 0.006 grams (approx.)
- Marking: See diagrams below



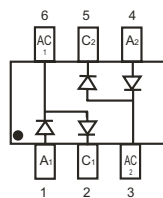
Circuit Diagram



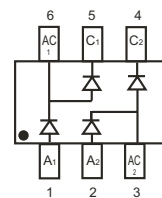
CDBV6-54T-G
Marking: KLA



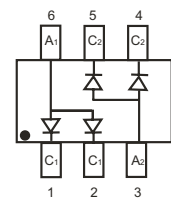
CDBV6-54CD-G*
Marking: KL7



CDBV6-54SD-G*
Marking: KL8



CDBV6-54BR-G
Marking: KLB



CDBV6-54AD-G*
Marking: KL6

*Symmetrical configuration, no orientation indicator.

Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Peak working reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	21	V
Forward continuous current	I_o	200	mA
Repetitive peak forward current	I_{FRM}	300	
Non-repetitive peak forward surge current @ t=8.3ms	I_{FSM}	600	
Power dissipation	P_D	200	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	500	°C/W
Junction temperature range	T_J	-40 ~ +125	°C
Storage temperature range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse voltage	$V_{(BR)}$	$I_R = 100\mu A$	30			V
Reverse current	I_R	$V_R = 25V$			2	μA
Forward voltage	V_F	$I_F = 1mA$			320	mV
		$I_F = 10mA$			400	
		$I_F = 30mA$			500	
		$I_F = 100mA$			1000	
Total capacitance	C_{tot}	$V_R = 1V, f = 1MHz$			10	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			5	ns

ELECTRICAL CHARACTERISTIC CURVES (CDBV6-54AD/CD/SD/BR/T-G)

Fig.1 - Typical Forward Characteristics

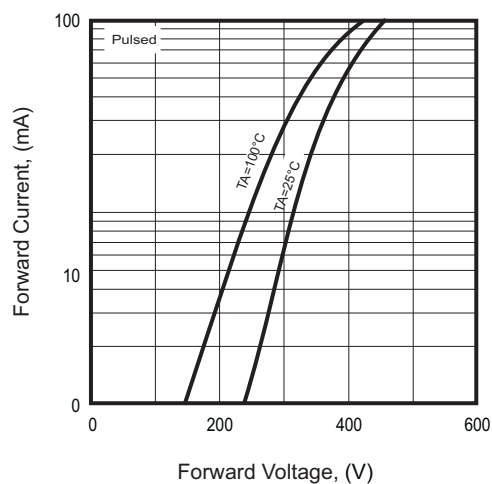


Fig.2 - Typical Reverse Characteristics

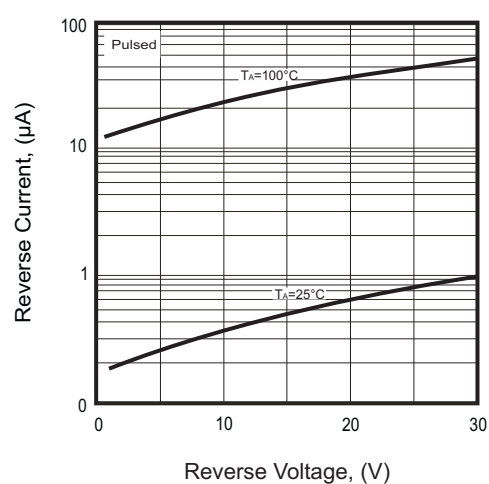


Fig.3 - Typical Capacitance Characteristics

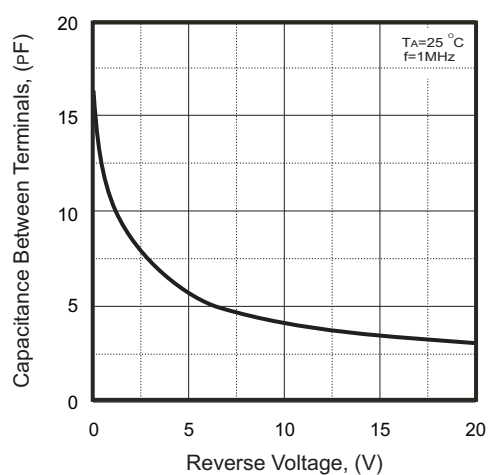
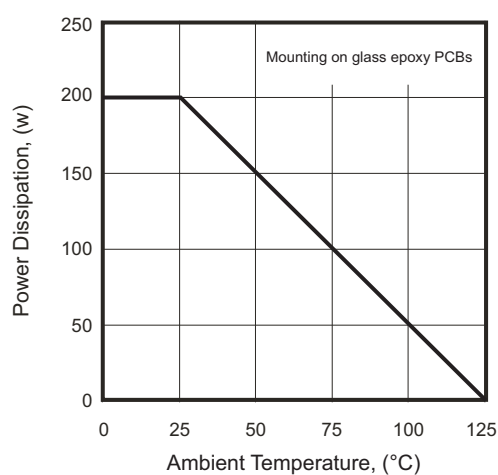
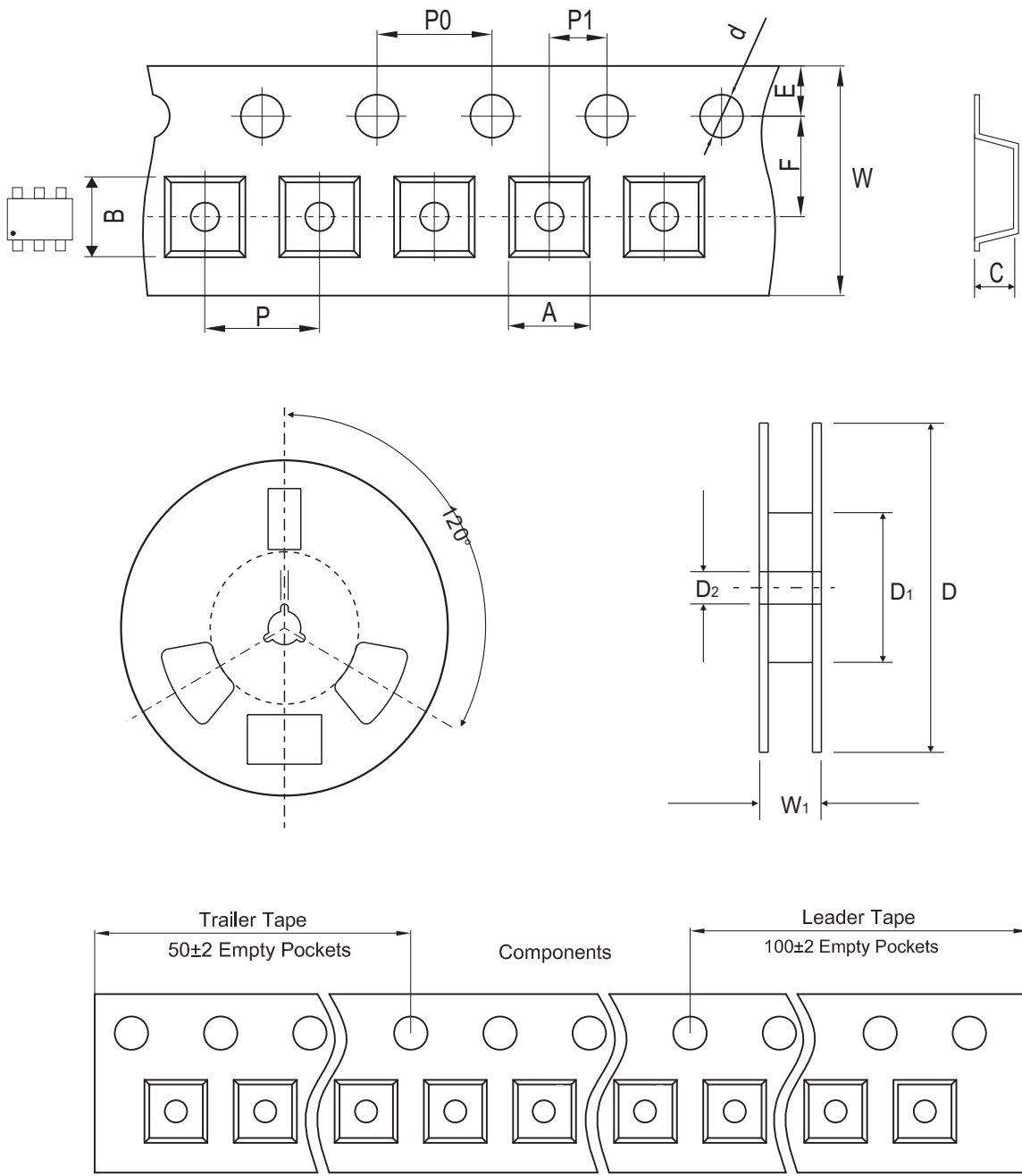


Fig.4 - Typical Power Derating Curve



Reel Taping Specification

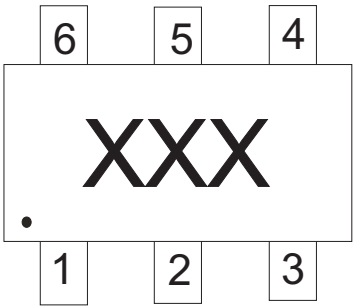


SOT-363	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.05	2.55 ± 0.05	1.20 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.089 ± 0.002	0.100 ± 0.002	0.047 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOT-363	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30/-0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012/-0.004	0.484 ± 0.039

Marking Code

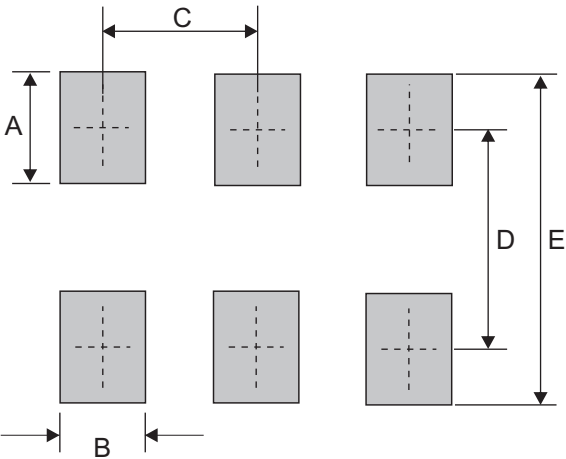
Part Number	Marking Code
CDBV6-54T-G	KLA
CDBV6-54AD-G	KL6
CDBV6-54CD-G	KL7
CDBV6-54SD-G	KL8
CDBV6-54BR-G	KLB



XXX = Product type marking code

Suggested PAD Layout

SIZE	SOT-363	
	(mm)	(inch)
A	0.80	0.031
B	0.40	0.016
C	0.65	0.026
D	1.94	0.076
E	2.74	0.108



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
SOT-363	3,000	7