

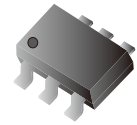
CDBV6-54T/AD/CD/SD/BR-HF

Forward Current: 0.2A

Reverse Voltage: 30V

RoHS Device

Halogen Free

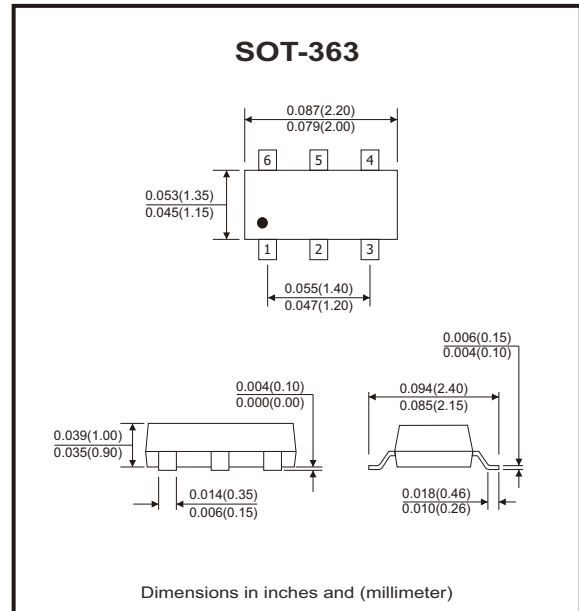


Features

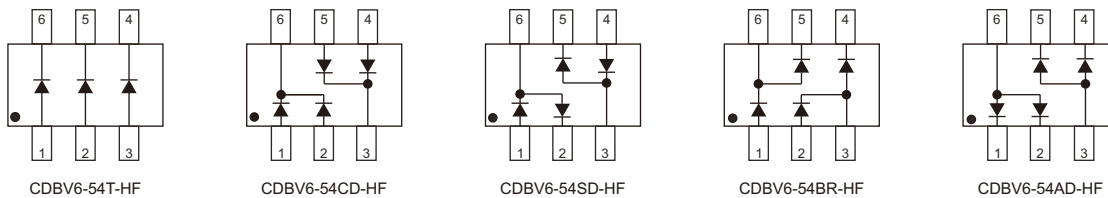
- Low forward voltage drop.
- Fast switching.
- Small surface mount package.
- PN junction guard ring for transient and ESD protection.

Mechanical data

- Case: SOT-363, molded plastic.
- Mounting position: Any.



Circuit Diagram



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		
Forward continuous current	I_o	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
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
Operating junction temperature range	T_J	-40 to +125	°C
Storage temperature range	T_{STG}	-50 to +150	°C

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

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

Rating and Characteristic Curves (CDBV6-54T/AD/CD/SD/BR-HF)

Fig.1 - Forward Characteristics

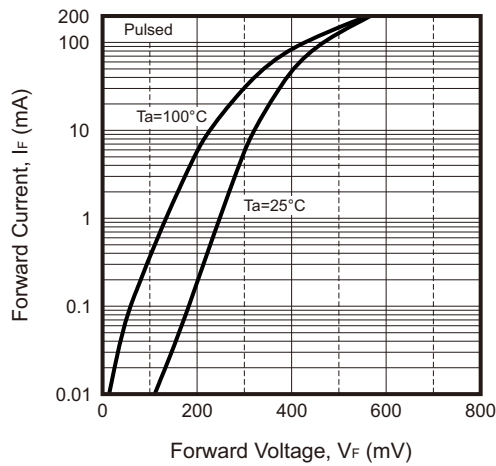


Fig.2 - Reverse Characteristics

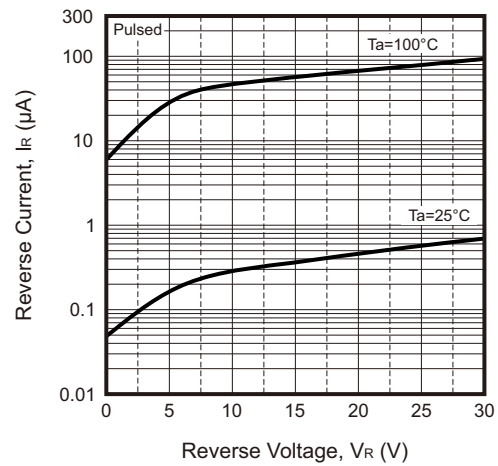


Fig.3 - Capacitance Characteristics

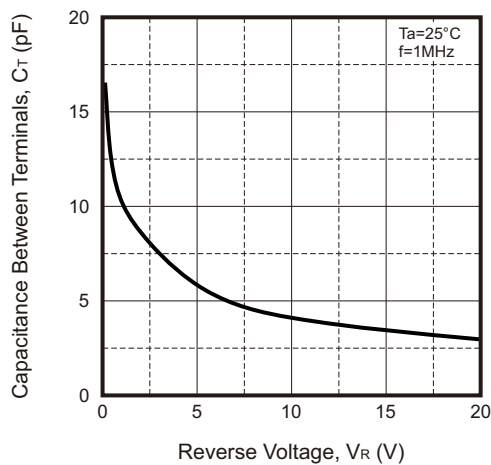
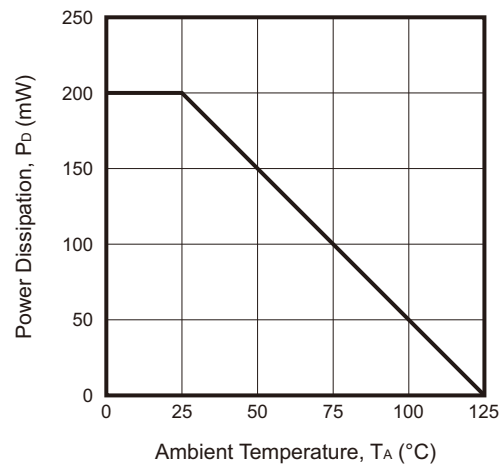


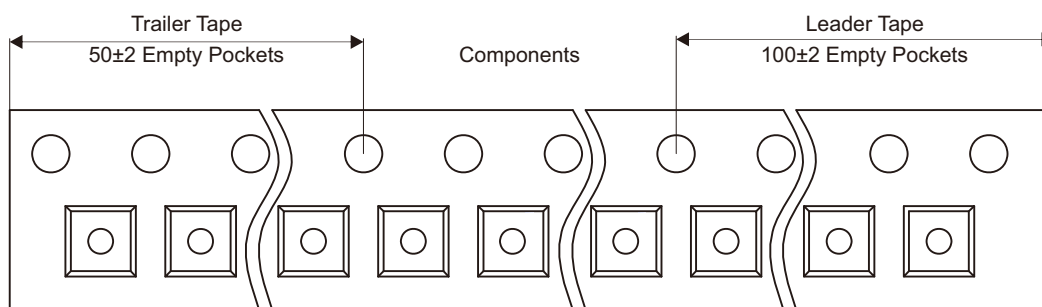
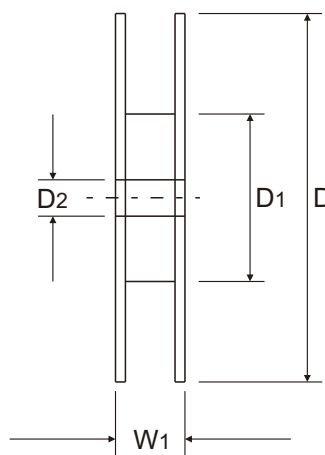
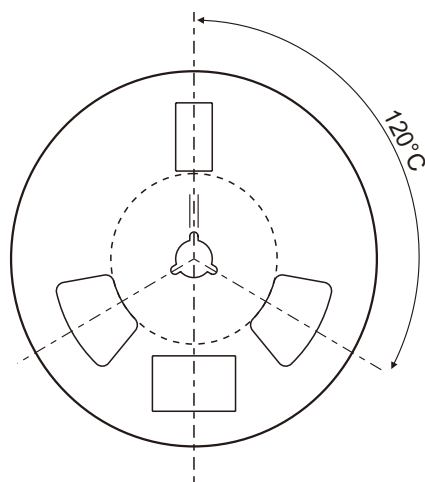
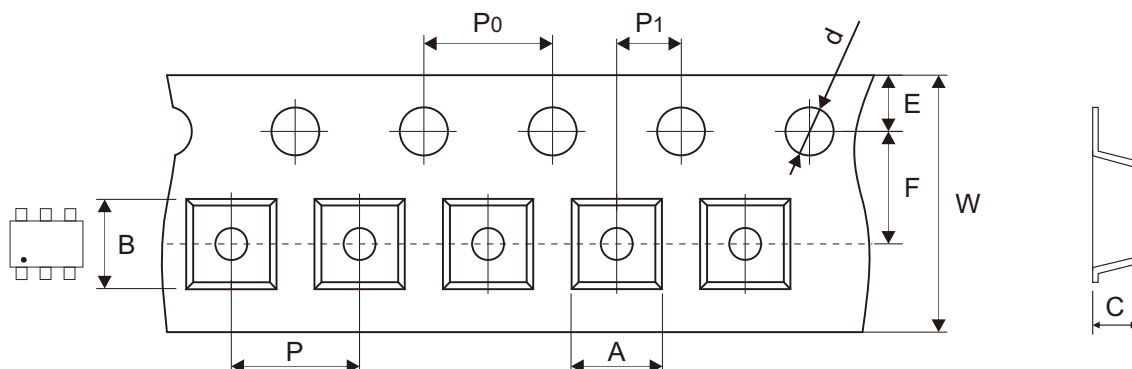
Fig.4 - Power Derating Curve



Company reserves the right to improve product design, functions and reliability without notice.

REV:A

Reel Taping Specification

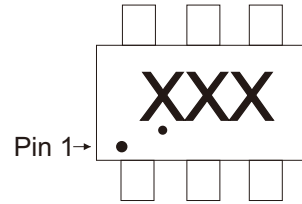


SOT-363	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.20 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

SOT-363	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

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

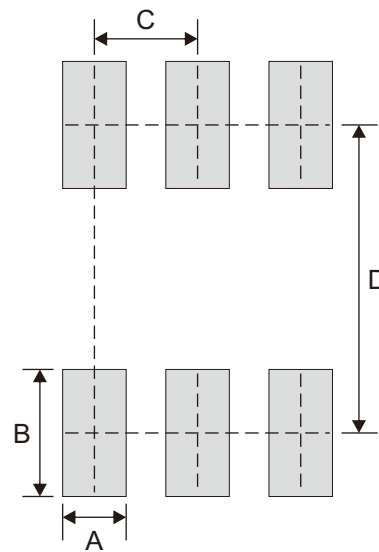


Solid dot = Control code
xxx = Product type marking code

Suggested P.C.B. PAD Layout

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

Note: 1. The pad layout is for reference purposes only.



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-363	3,000	7