

CDSV6-4448TI/AQ/AD/CD/SD-HF

RoHS Device
Halogen Free



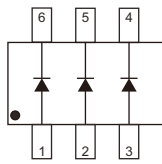
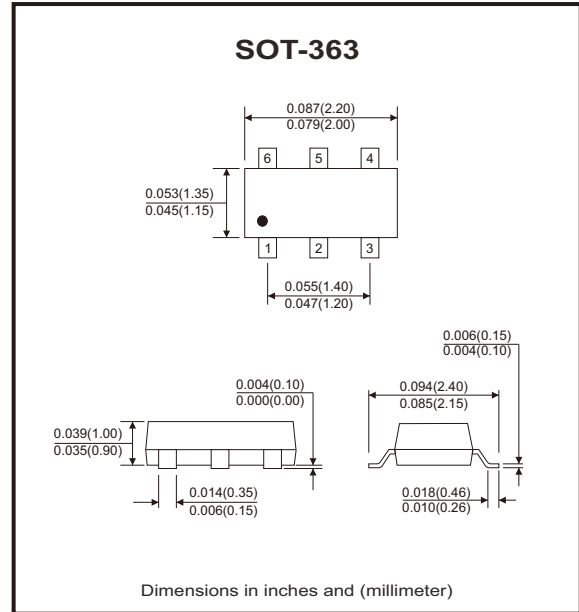
Features

- Fast switching speed.
- Ultra-small surface mount package.
- For general purpose switching applications
- High conductance power dissipation.

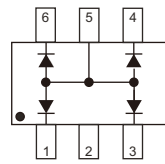
Mechanical data

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

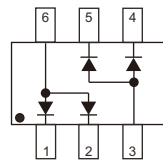
Circuit Diagram



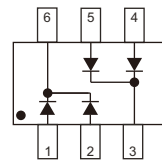
CDSV6-4448TI-HF



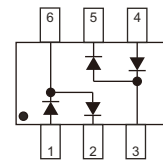
CDSV6-4448AQ-HF



CDSV6-4448AD-HF



CDSV6-4448CD-HF



CDSV6-4448SD-HF

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

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive peak reverse voltage	V_{RRM}	80	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	57	V
Forward continuous current	I_{FM}	500	mA
Average rectified output current	I_o	250	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Power dissipation	P_D	200	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	625	°C/W
Operation junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 100\mu A$	$V_{(BR)}$	80			V
Forward voltage	$I_F = 5mA$	V_F	0.62		0.72	V
	$I_F = 10mA$				0.855	
	$I_F = 100mA$				1.0	
	$I_F = 150mA$				1.25	
Reverse current	$V_R = 70V$	I_R			100	nA
	$V_R = 20V$				25	
Capacitance between terminals	$V_R = 0V, f = 1MHz$	C_T			3.5	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}			4	ns

Typical Rating and Characteristic Curves (CDSV6-4448TI/AQ/AD/AD/CD-HF)

Fig.1 - Forward Characteristics

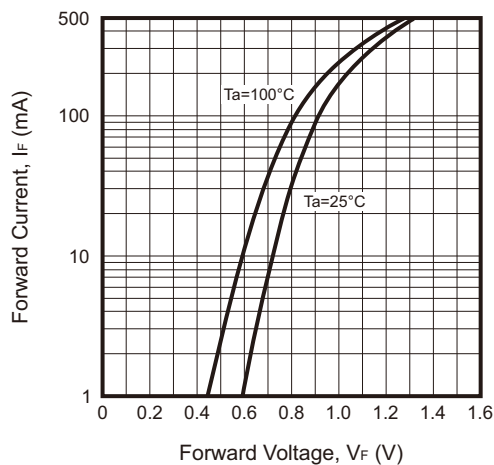


Fig.2 - Reverse Characteristics

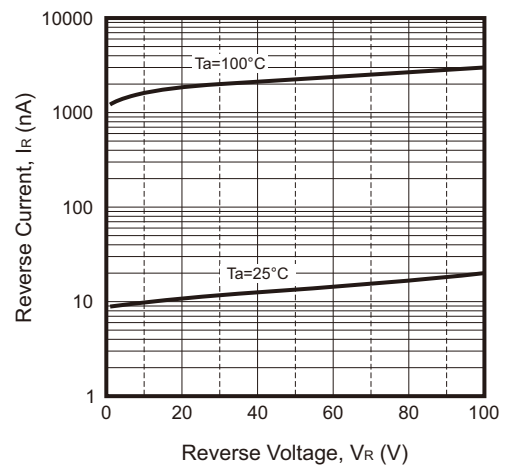


Fig.3 - Capacitance Characteristics

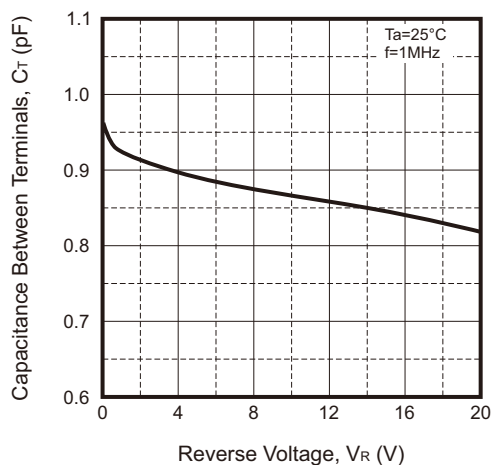
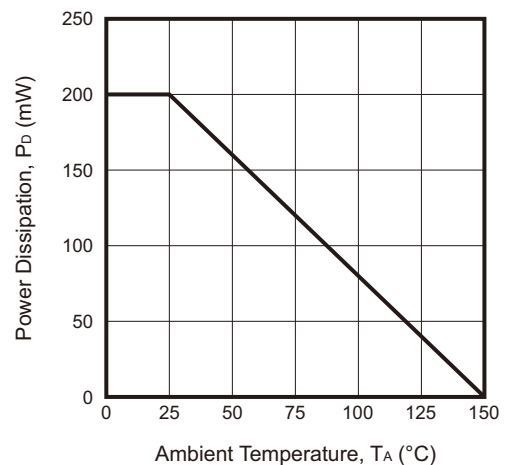
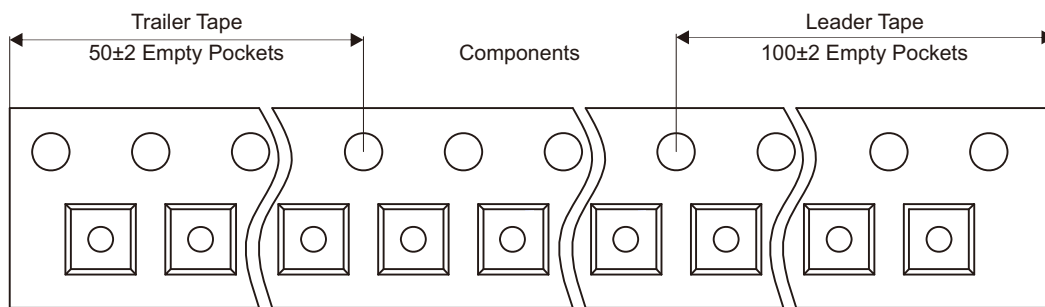
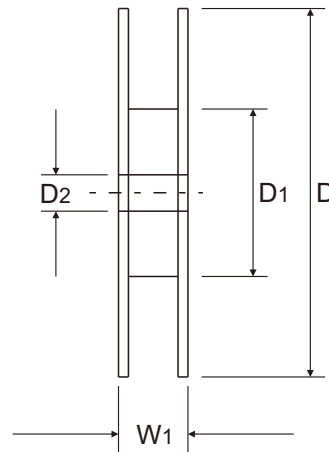
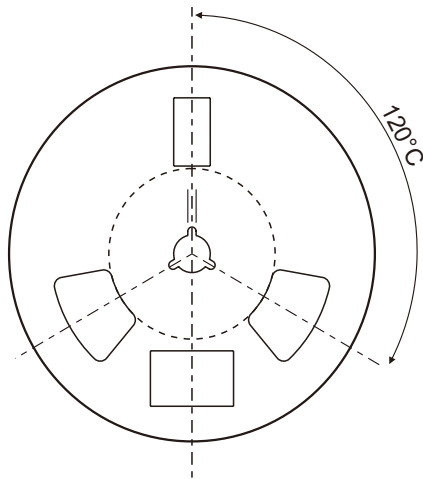
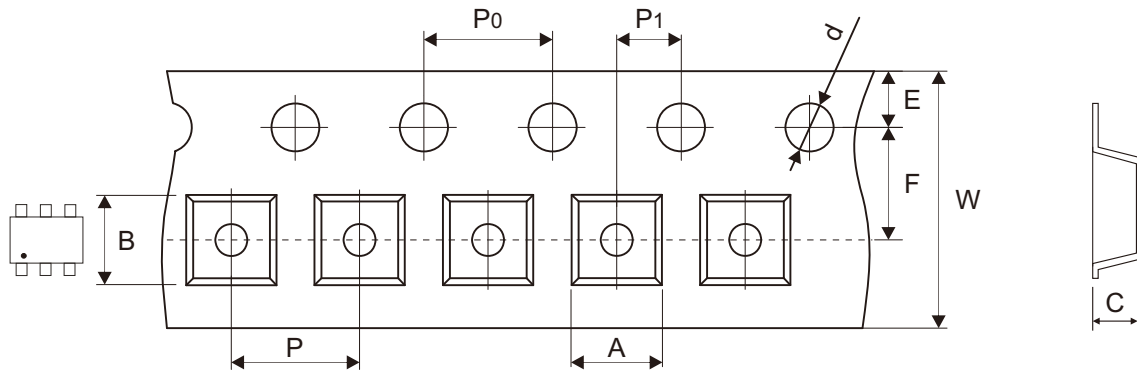


Fig.4 - Power Derating Curve



Reel Taping Specification

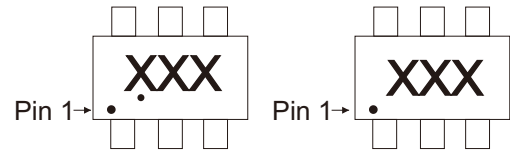


SOT-363	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25 ± 0.10	2.55 ± 0.10	1.20 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.089 ± 0.004	0.100 ± 0.004	0.047 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

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
CDSV6-4448TI-HF	KA A
CDSV6-4448AQ-HF	KA 5
CDSV6-4448AD-HF	KA 6
CDSV6-4448CD-HF	KA 7
CDSV6-4448SD-HF	KA B

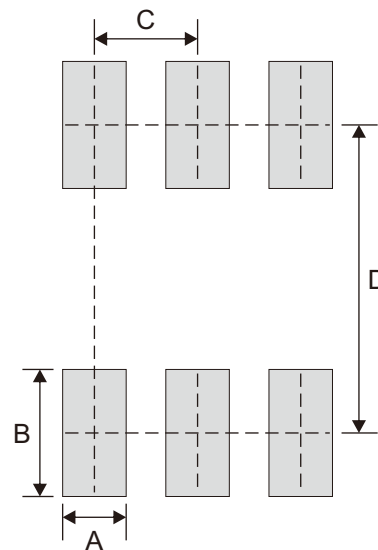


Solid dot = Control code
xxx = Product type marking code

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