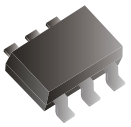
SMD Switching Diode

CDSV6-4448D-G

RoHS Device



Features

-Fast switching speed.

-Ultra-small surface mount package.

-For general purpose switching applications.

-High conductance power dissipation.

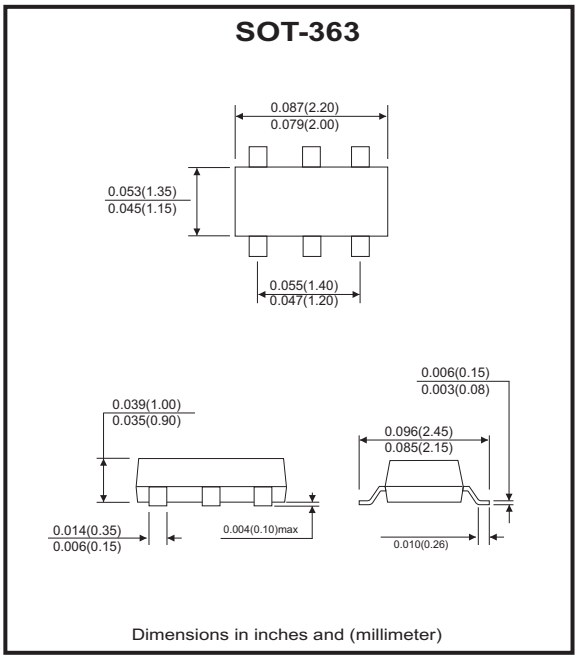
Mechanical data

-Case:SOT-363 , molded plastic.

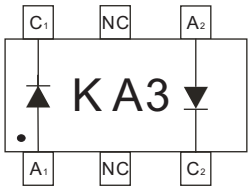
-Terminals: Solder plated, solderable per MIL-STD-750,method 2026.

-Mounting position: Any.

-Weight: 0.0091 gram (approx.)



Marking: KA3



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

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage Working peak reverse voltage DC Blocking voltage	V_{RRM} V_{RWM} V_R	75	V
RMS Reverse voltage	$V_{R(RMS)}$	53	V
Forward continuous current	I_{FM}	500	mA
Average rectified output current	I_O	250	mA
Non-repetitive peak forward surge current @t < 1us @t < 1s	I_{FSM}	4 2	A
Power dissipation	Pd	200	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	625	°C/W
Operating and storage temperature range	Tj, T_{STG}	-65 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	I_R = 10uA	V_{BR}	75			V
Forward voltage	I_F = 50mA I_F = 10mA I_F = 50mA I_F = 150mA	V_F	0.62		0.720 0.855 1.0 1.25	V
Reverse current	V_R = 75V V_R = 75V, T_J = 150°C V_R = 25V, T_J = 150°C V_R = 20V	I_R			2.5 50 30 25	uA uA uA nA
Diode junction Capacitance	V_R = 0, f = 1.0MHz	C_J			4.0	pF
Reverse recovery time	I_F = I_R = 10mA Irr = 0.1 x I_R,R_L = 100Ω	Trr			4.0	nS

RATING AND CHARACTERISTIC CURVES (CDSV6-4448D-G)

Fig.1 - Forward characteristics

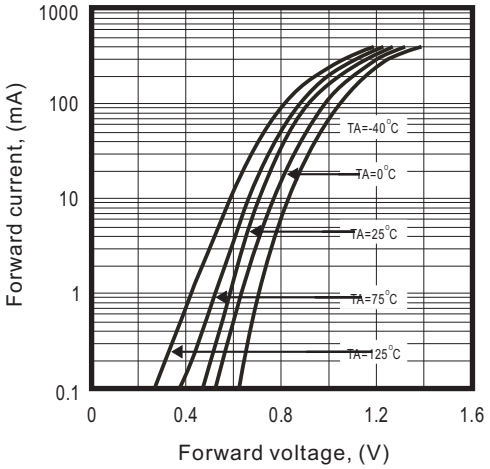


Fig.2 - Reverse characteristics

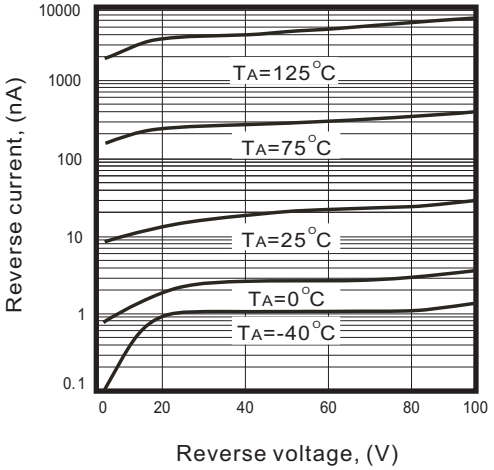


Fig.3 - Capacitance between terminals characteristics

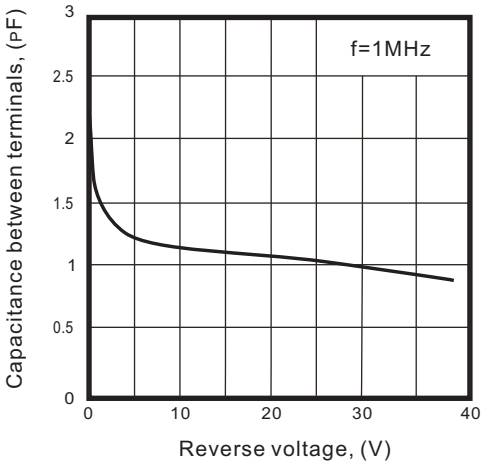


Fig.4 - Power derating curve

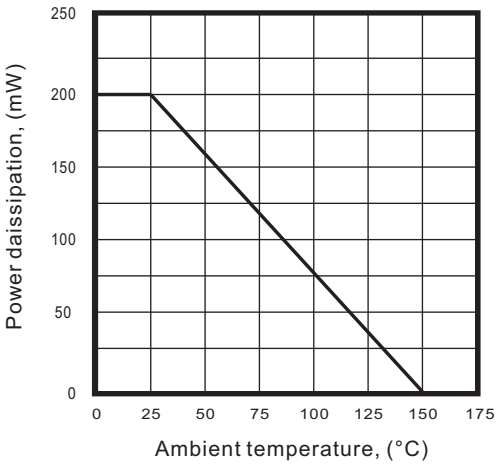
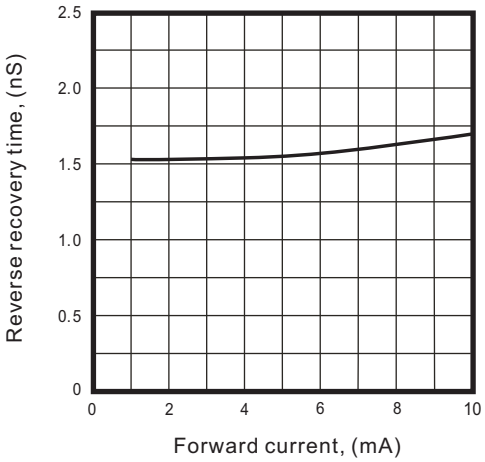
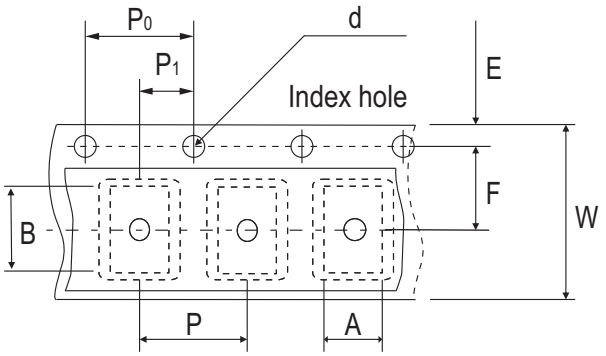
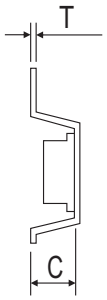


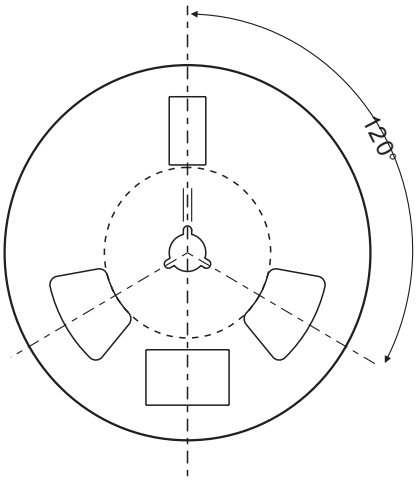
Fig.5 - Reverse recovery time vs. forward current

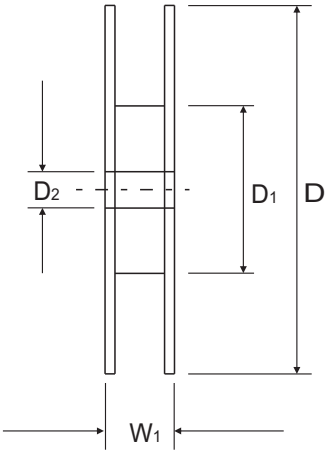


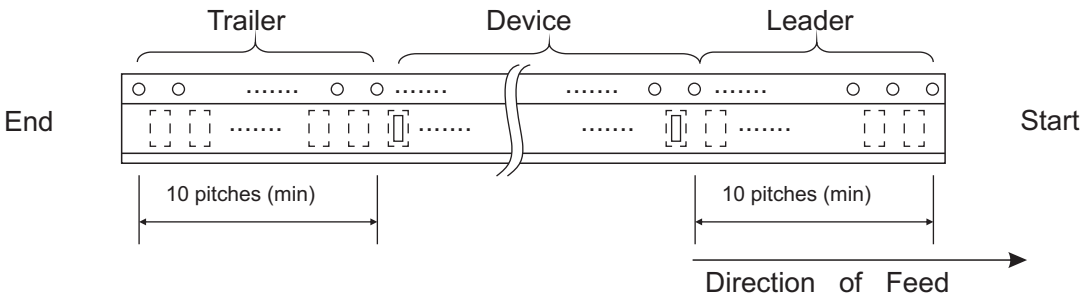
Reel Taping Specification









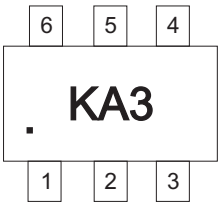


	SYMBOL	A	B	C	d	D	D1	D2
SOT-363	(mm)	2.20 ± 0.10	2.40 ± 0.10	1.35 ± 0.10	1.55 ± 0.10	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.087 ± 0.004	0.094 ± 0.004	0.053 ± 0.004	0.061 ± 0.004	7.008 ± 0.040	1.969 MIN.	0.512 ± 0.008

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-363	(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	14.4 MAX.
	(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	0.567 MAX

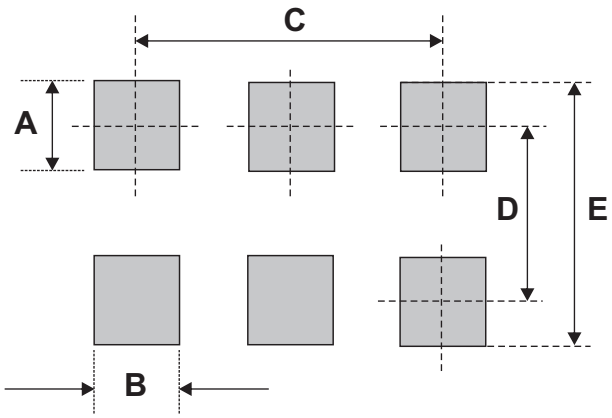
Marking Code

Part Number	Marking Code
CDSV6-4448D	KA3



Suggested PAD Layout

SIZE	SOT-363	
	(mm)	(inch)
A	0.80	0.031
B	0.35	0.014
C	1.30	0.051
D	1.94	0.076
E	2.74	0.108



Standard Packaging

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