

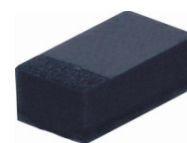
SMD Switching Diode



SMD Diodes Specialist

CDSQR4148-HF (RoHS Device)

High Speed

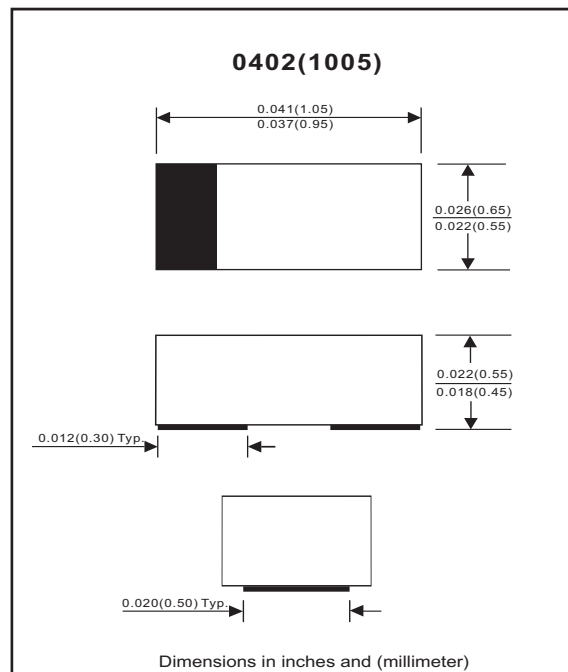


Features

- Halogen free.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- High mounting capability, strong surge withstand, high reliability.

Mechanical data

- Case: 0402(1005) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: Cathode band & S3
- Mounting position: Any
- Weight: 0.001 gram(approx.).



Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V_{RRM}			100	V
Reverse voltage		V_R			75	V
Average forward current		I_O			150	mA
Forward current,surge peak	$T_P = 1\mu S$ $T_P = 1mS$	I_{FSM}		4 1		A
Repetitive peak forward current		I_{FRM}			300	mA
Power Dissipation		P_D			125	mW
Storage temperature		T_{STG}	-40		+125	°C
Junction temperature		T_J			+125	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 50\text{ mA DC}$	V_F			1.0	V
Reverse current	$V_R = 20\text{ V}$ $V_R = 75\text{ V}$	I_R			25 2.5	nA uA
Capacitance between terminals	$f = 1\text{ MHz}$, and 0VDC reverse voltage	C_T			4	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$, $R_L = 100\text{ ohms}$, $I_{rr} = 1\text{ mA}$	T_{rr}			4	nS

REV:A

RATING AND CHARACTERISTIC CURVES (CDSQR4148-HF)

Fig. 1 - Forward characteristics

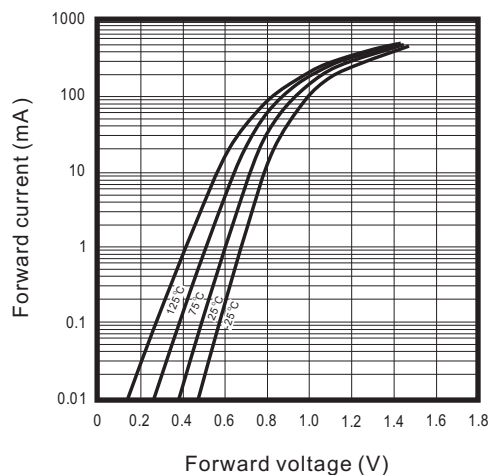


Fig. 2 - Reverse characteristics

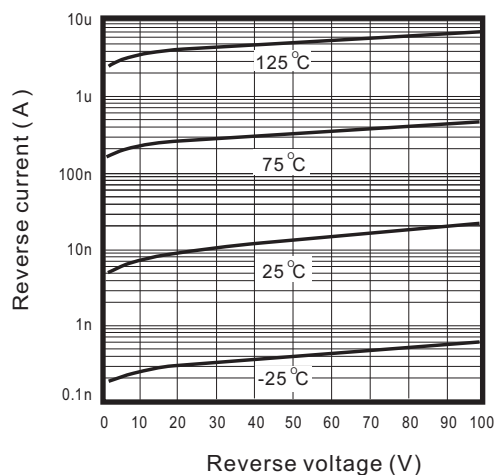


Fig. 3 - Capacitance between terminals characteristics

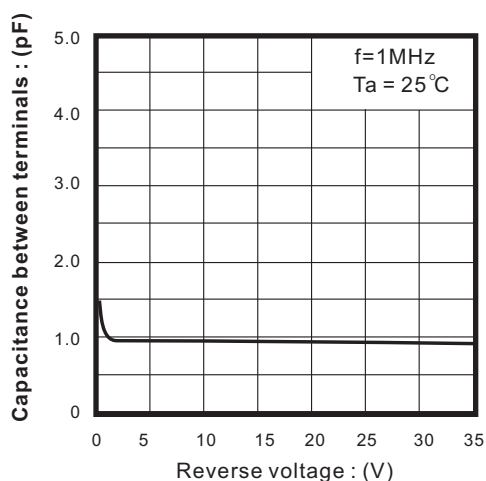
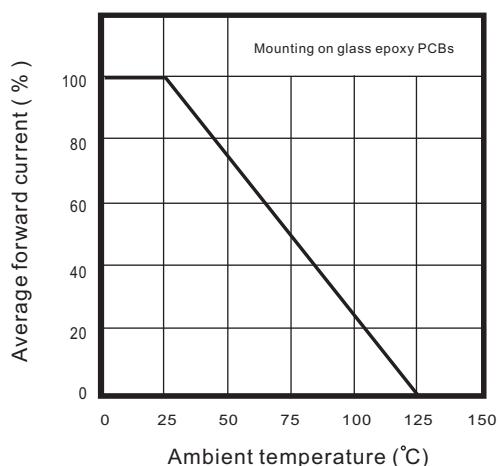
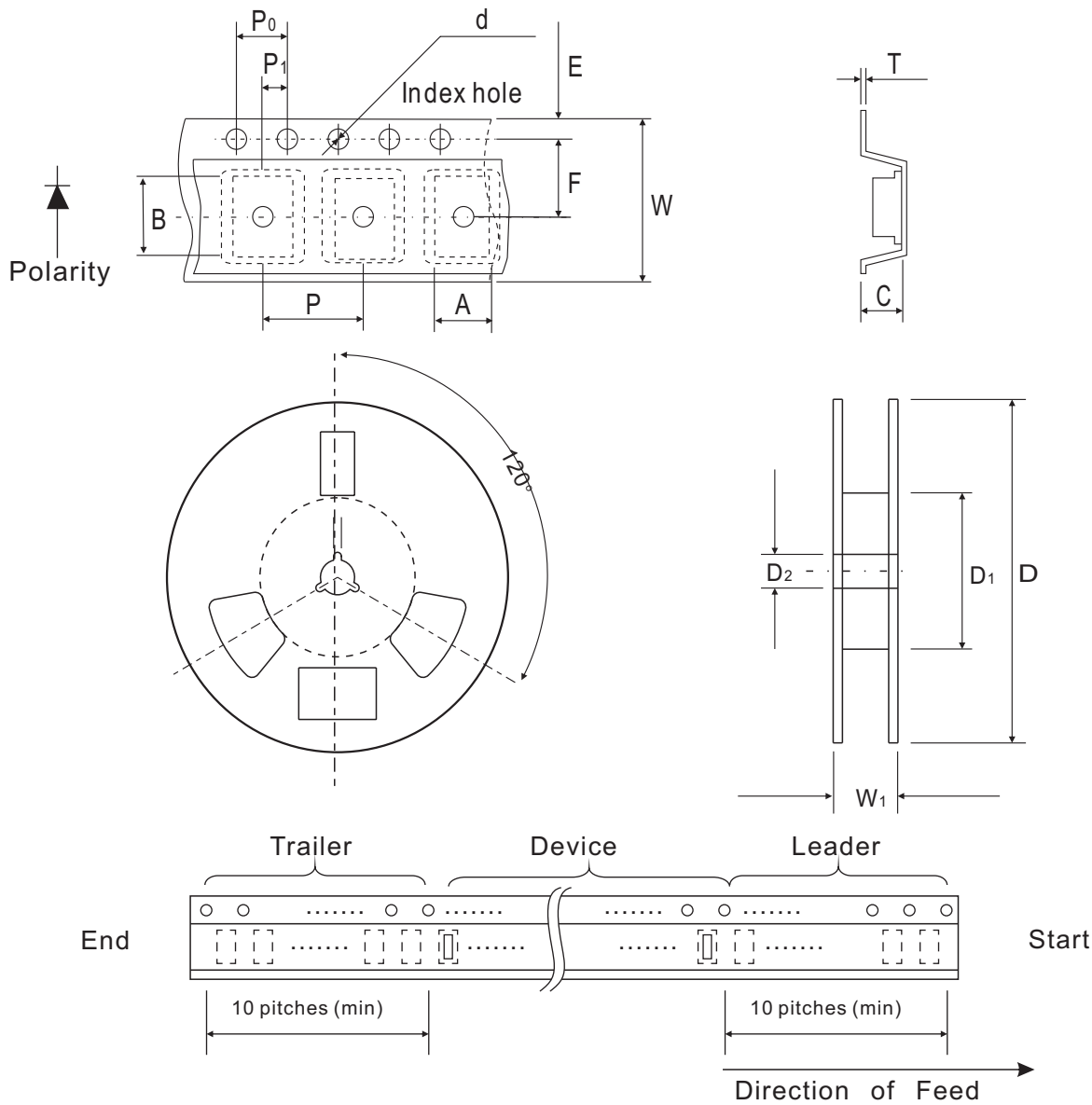


Fig. 4 - Current derating curve



Reel Taping Specification



QR/0402	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.80 ± 0.10	1.30 ± 0.10	0.55 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.031 ± 0.004	0.051 ± 0.004	0.022 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

QR/0402	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

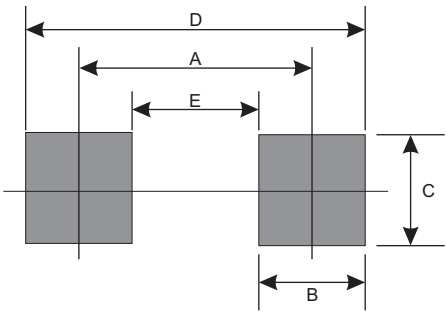
Marking Code

Park Number	Marking Code
CDSQR4148-HF	S3



Suggested PAD Layout

SIZE	QR/0402	
	(mm)	(inch)
A	0.750	0.030
B	0.500	0.020
C	0.700	0.028
D	1.250	0.049
E	0.250	0.010



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
QR/0402	5000	7