



SE24Q1BDIH

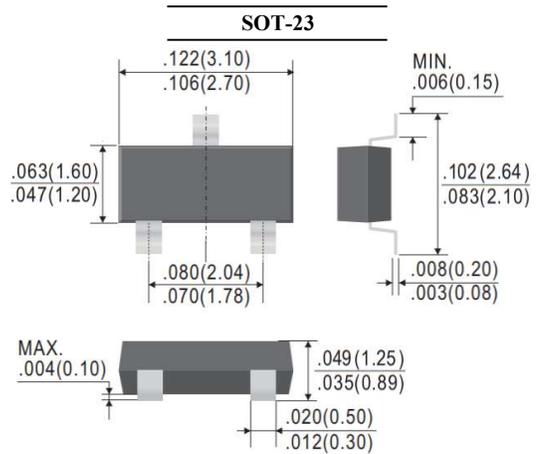
ESD PROTECTION DIODE

FEATURES

- IEC61000-4-2(ESD) 23kV(Contact)
- Low Clamping Voltage
- Low leakage current
- Working Voltage 24V
- Suffix " H " indicated Halogen-free part, ex.SE24Q1BDIH

APPLICATIONS

- CAN bus protection
- Automotive applications

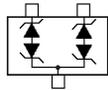


Dimensions in inches and (millimeters)

MECHANICAL DATA

Case : SOT-23

PIN CONFIGURATION



Maximum Ratings (Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$) (Note 1, 2)	P_{PP}	200	W
Peak Pulse Current ($t_p = 8/20\mu s$) (Note 1, 2)	I_{PP}	3	A
ESD per IEC 61000-4-2 (Contact) (Note 1, 2)	V_{ESD}	23	kV
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Note :

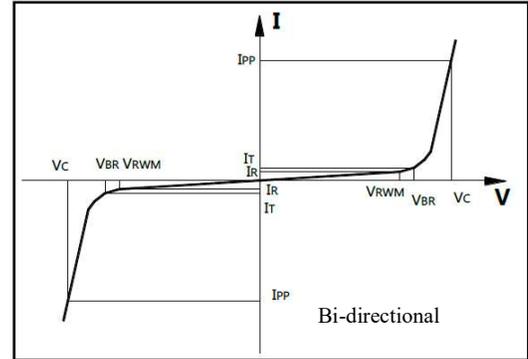
1. Device stressed with ten non-repetitive ESD pulses.
2. Measured from pin 1 to 3 or 2 to 3.



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Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
V_R	Reverse Voltage
C_j	Capacitance



Electrical Characteristics Per line at 25°C Unless Otherwise Specified

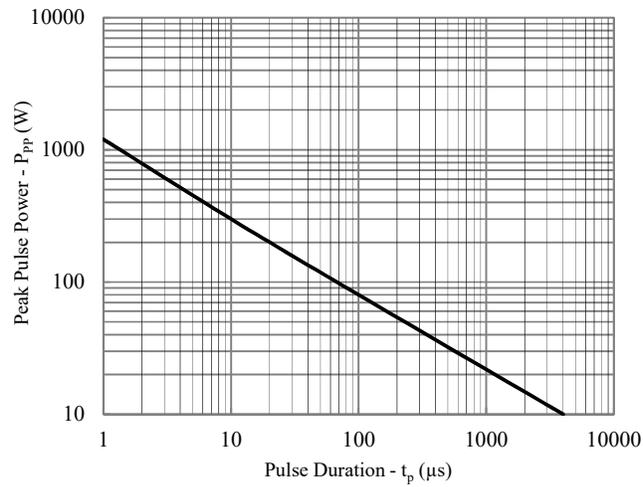
Parameter	Test Condition	Symbol	Min	Typ.	Max	Units
Reverse Stand-Off Voltage	-	V_{RWM}	-	-	24.0	V
Reverse Breakdown Voltage	$I_T=5mA$	$V_{(BR)}$	25.4	-	30.3	V
Reverse Leakage Current	$V_{RWM}=24V$	I_R	-	-	50	nA
Clamping Voltage	$I_{PP}=1A$	V_C	-	-	40.0	V
	$I_{PP}=3A$		-	-	70.0	
Diode Capacitance	$V_R=0V, f=1MHz$	C_d	-	11	-	pF



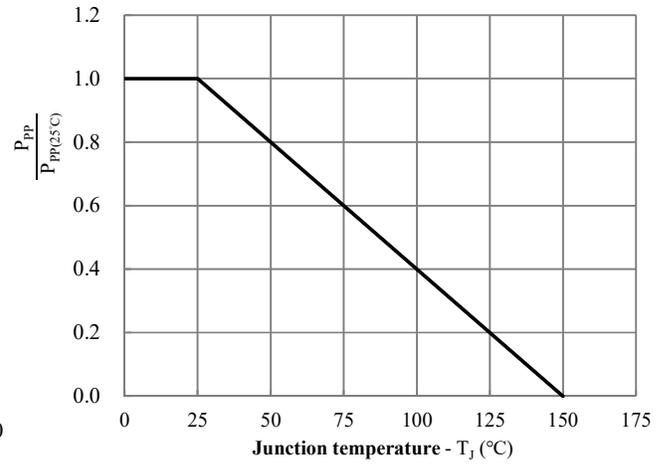
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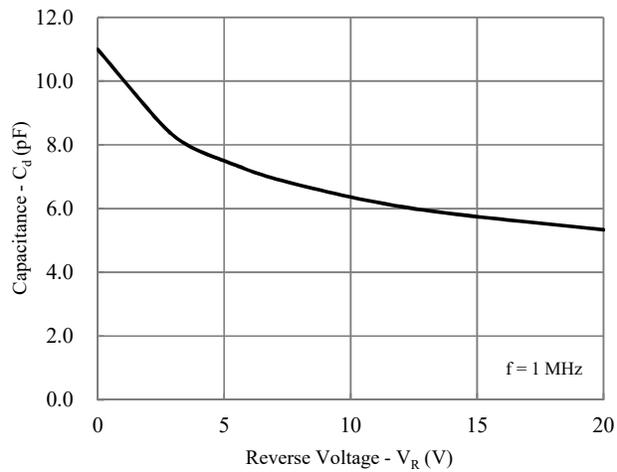
RATINGS AND CHARACTERISTIC CURVES



Non-Repetitive Peak Pulse Power vs. Pulse Time



Relative variation of peak pulse power as a function of junction temperature; typical values



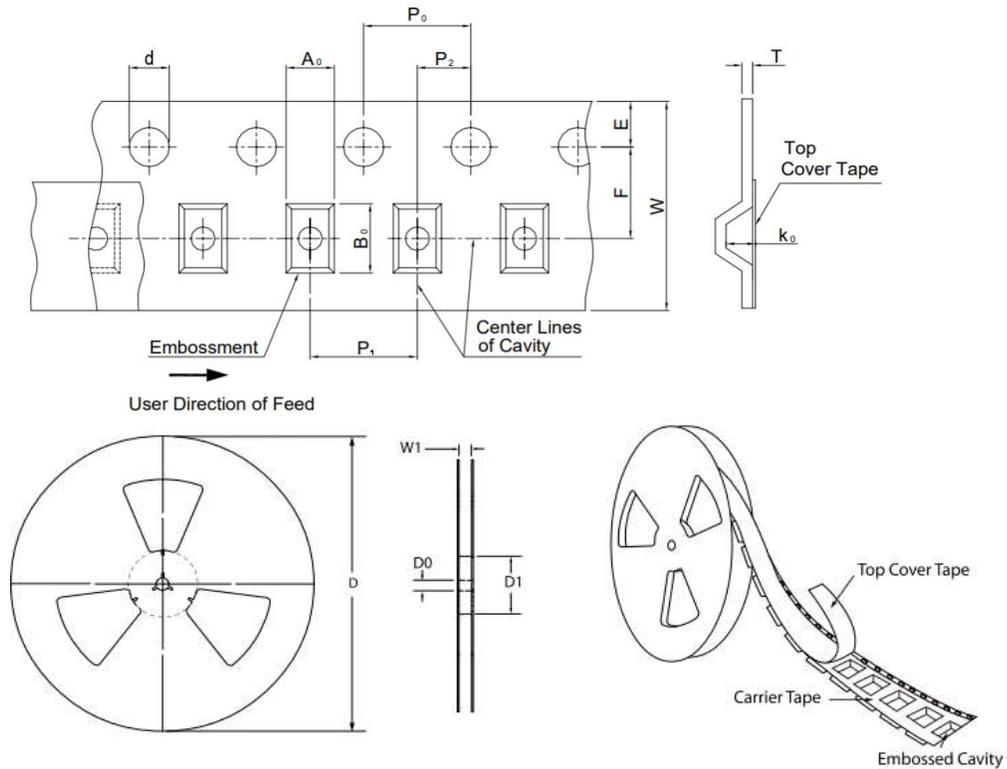
Diode Capacitance vs. Reverse Voltage



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TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A_0	3.30 ± 0.10
Carrier length	B_0	2.90 ± 0.10
Carrier depth	K	1.45 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 54.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	MAX. 0.60
Tape width	W	8.00 ± 0.30
Reel width	W1	MAX. 10.00

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

MARKING CODE

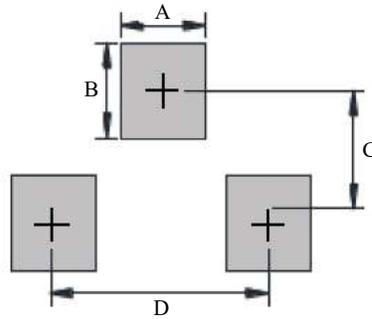
Part Number	Marking Code
SE24Q1BDIH	W3



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SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23	0.80	0.80	2.02	1.90