

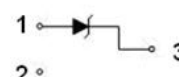
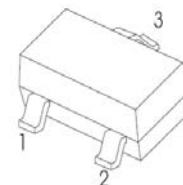
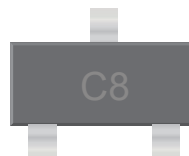
PRIMARY CHARACTERISTICS	
P_D	300mW
V_Z	2.4V~51V
I_{ZT}	Please refer to the specification
$T_{J,Max}$	150°C

FEATURES	
●	Planar Die Construction
●	300mW Power Dissipation
●	Zener Voltages from 2.4V - 51V
●	Ultra-Small Surface Mount Package
●	Power Dissipation
●	Moisture Sensitivity Level 1

SOT-23 PACKAGE

Marking Code : Please refer to the specification

Ex : BZX84C2V4, W1 or Z11



MECHANICAL DATA	
●	Case : Molded plastic,SOT-23
●	Polarity : As Above Marked
●	Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
●	Epoxy : UL94-V0 rated flame retardant

Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation(Note 1)	P_d	300	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^{\circ}\text{C}$

Notes: 1. Valid provided that device terminals are kept at ambient temperature.

2. Tested with pulses, period=5ms,pulse width =300 μs .

3. $f = 1\text{kHz}$.

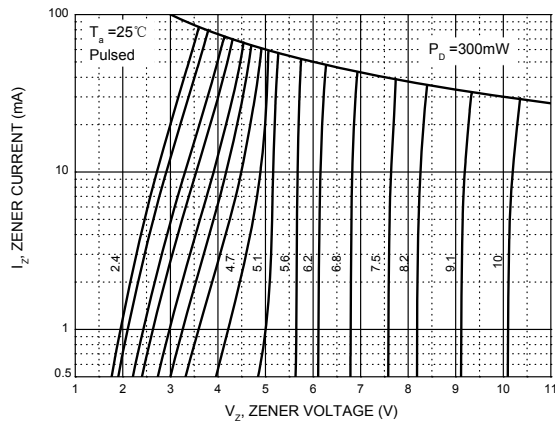
300mW SURFACE MOUNT SILICON ZENER DIODES 2.4V ~51V

Type	Marking Code	Zener Voltage Range 1)				Dynamic Impedance				Reverse Current	
		VZT			at IZT	ZZT	at IZT	ZZK	at IZK	IR	at VR
		Nom. (V)	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (Ω)	(mA)	Max. (μA)	(V)
BZX84C2V4	C8/Z11	2.4	2.2	2.6	5	100	5	600	1	50	1
BZX84C2V7	D8/Z12	2.7	2.5	2.9	5	100	5	600	1	20	1
BZX84C3V0	E8/Z13	3	2.8	3.2	5	95	5	600	1	10	1
BZX84C3V3	F8/Z14	3.3	3.1	3.5	5	95	5	600	1	5	1
BZX84C3V6	H8/Z15	3.6	3.4	3.8	5	90	5	600	1	5	1
BZX84C3V9	J8/Z16	3.9	3.7	4.1	5	90	5	600	1	3	1
BZX84C4V3	K8/Z17	4.3	4	4.6	5	90	5	600	1	3	1
BZX84C4V7	M8/Z1	4.7	4.4	5	5	80	5	500	1	3	2
BZX84C5V1	N8/Z2	5.1	4.8	5.4	5	60	5	480	1	2	2
BZX84C5V6	P8/Z3	5.6	5.2	6	5	40	5	400	1	1	2
BZX84C6V2	R8/Z4	6.2	5.8	6.6	5	10	5	150	1	3	4
BZX84C6V8	X8/Z5	6.8	6.4	7.2	5	15	5	80	1	2	4
BZX84C7V5	Y8/Z6	7.5	7	7.9	5	15	5	80	1	1	5
BZX84C8V2	Z8/Z7	8.2	7.7	8.7	5	15	5	80	1	0.7	5
BZX84C9V1	A9/Z8	9.1	8.5	9.6	5	15	5	100	1	0.5	6
BZX84C10	B9/Z9	10	9.4	10.6	5	20	5	150	1	0.2	7
BZX84C11	C9/Y1•	11	10.4	11.6	5	20	5	150	1	0.1	8
BZX84C12	D9/Y2•	12	11.4	12.7	5	25	5	150	1	0.1	8
BZX84C13	E9/Y3	13	12.4	14.1	5	30	5	170	1	0.1	8
BZX84C15	F9/Y4	15	13.8	15.6	5	30	5	200	1	0.05	10.5
BZX84C16	H9/Y5	16	15.3	17.1	5	40	5	200	1	0.05	11.2
BZX84C18	J9/Y6•	18	16.8	19.1	5	45	5	225	1	0.05	12.6
BZX84C20	K9/Y7	20	18.8	21.2	5	55	5	225	1	0.05	14
BZX84C22	M9/Y8	22	20.8	23.3	5	55	5	250	1	0.05	15.4
BZX84C24	N9/Y9	24	22.8	25.6	5	70	5	250	1	0.05	16.8
BZX84C27	P9/Y10	27	25.1	28.9	2	80	2	300	0.5	0.05	18.9
BZX84C30	R9/Y11•	30	28	32	2	80	2	300	0.5	0.05	21
BZX84C33	X9/Y12	33	31	35	2	80	2	325	0.5	0.05	23.1
BZX84C36	Y9/Y13	36	34	38	2	90	2	350	0.5	0.05	25.2
BZX84C39	Z9/Y14	39	37	41	2	130	2	350	0.5	0.05	27.3
BZX84C43	A0/Y15	43	40	46	2	150	2	375	0.5	0.05	30.1
BZX84C47	B0/Y16	47	44	50	2	170	2	375	0.5	0.05	32.9
BZX84C51	C0/Y17	51	48	54	2	180	2	400	0.5	0.05	35.7

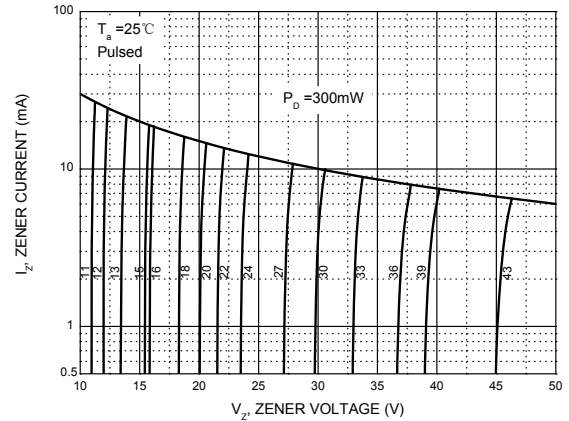
⁽¹⁾Tested with pulses $t_p = 20$ ms.

ELECTRICAL CHARACTERISTICS

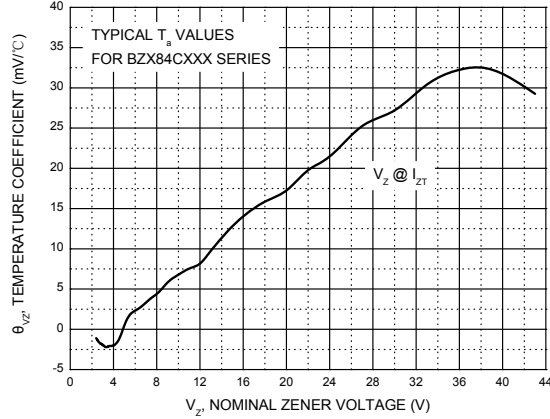
Zener Characteristics (V_z Up to 10 V)



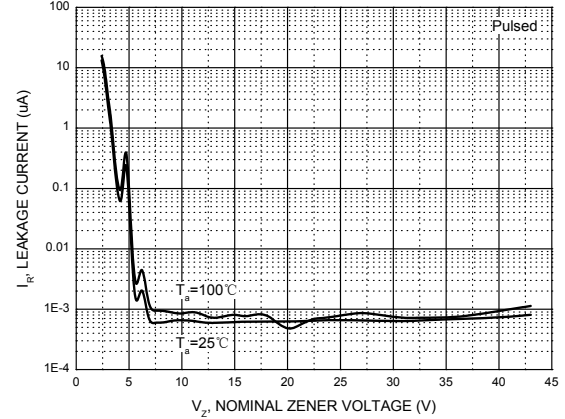
Zener Characteristics (11 V to 43 V)



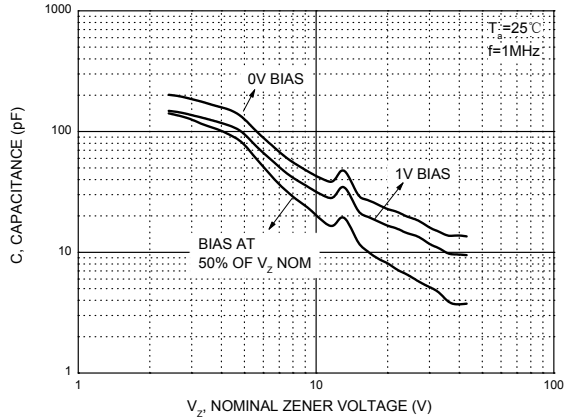
Temperature Coefficients



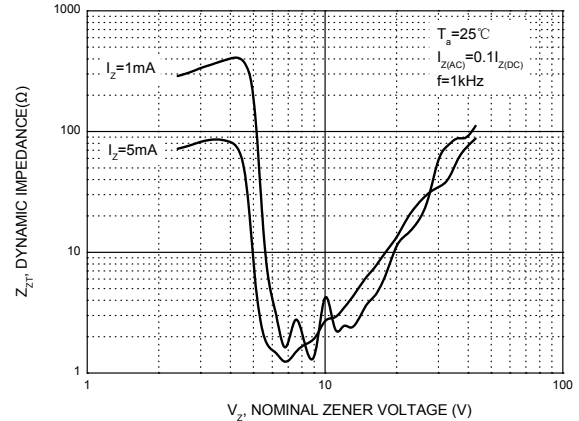
Typical Leakage Current



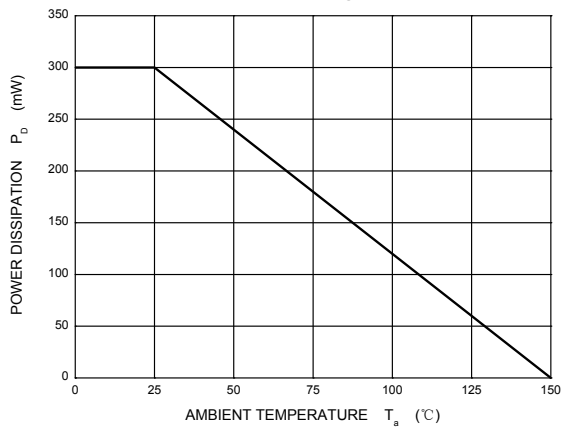
Typical Capacitance



Effect of Zener Voltage on Zener Impedance

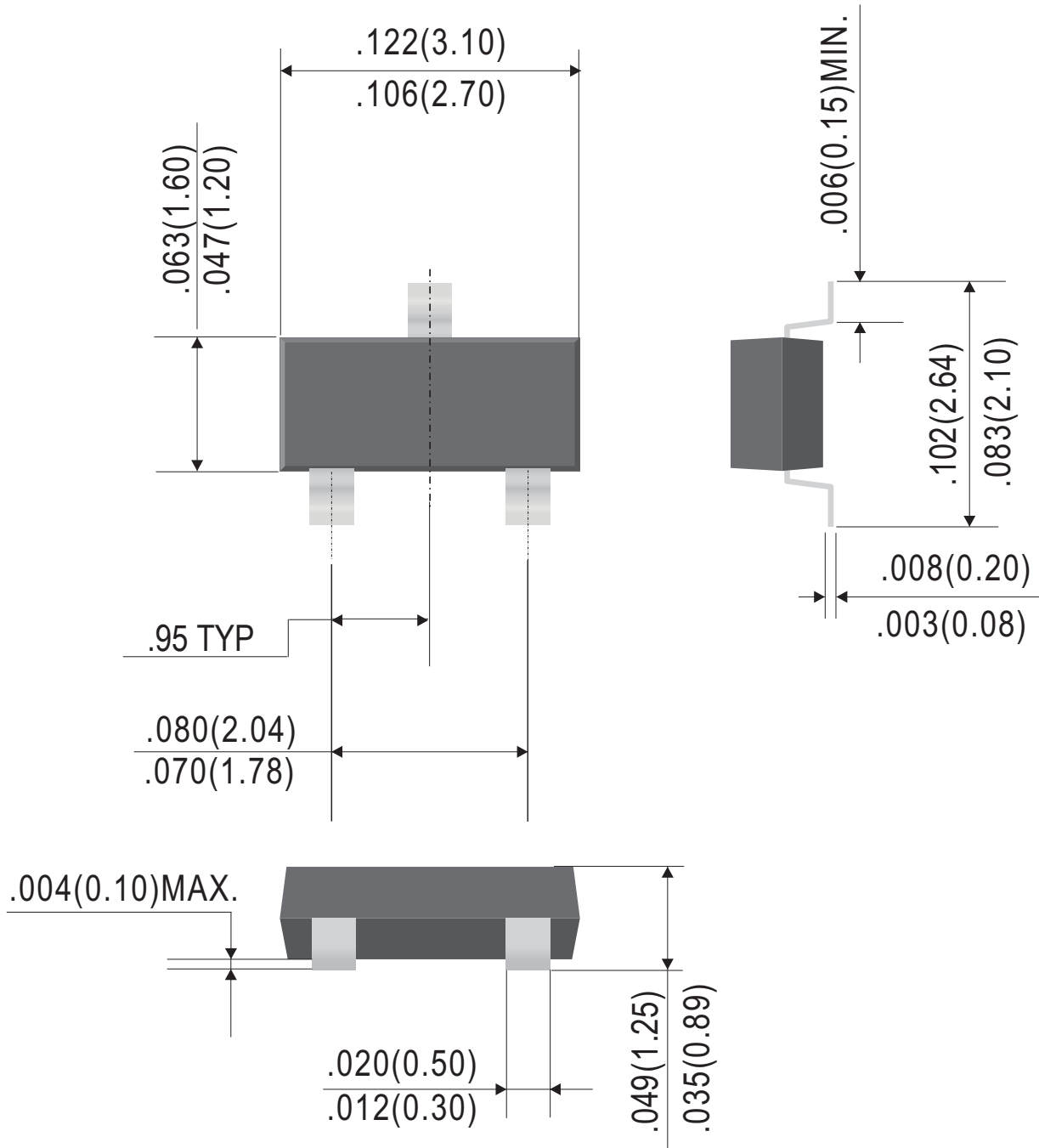


Power Derating Curve



Outline Drawing

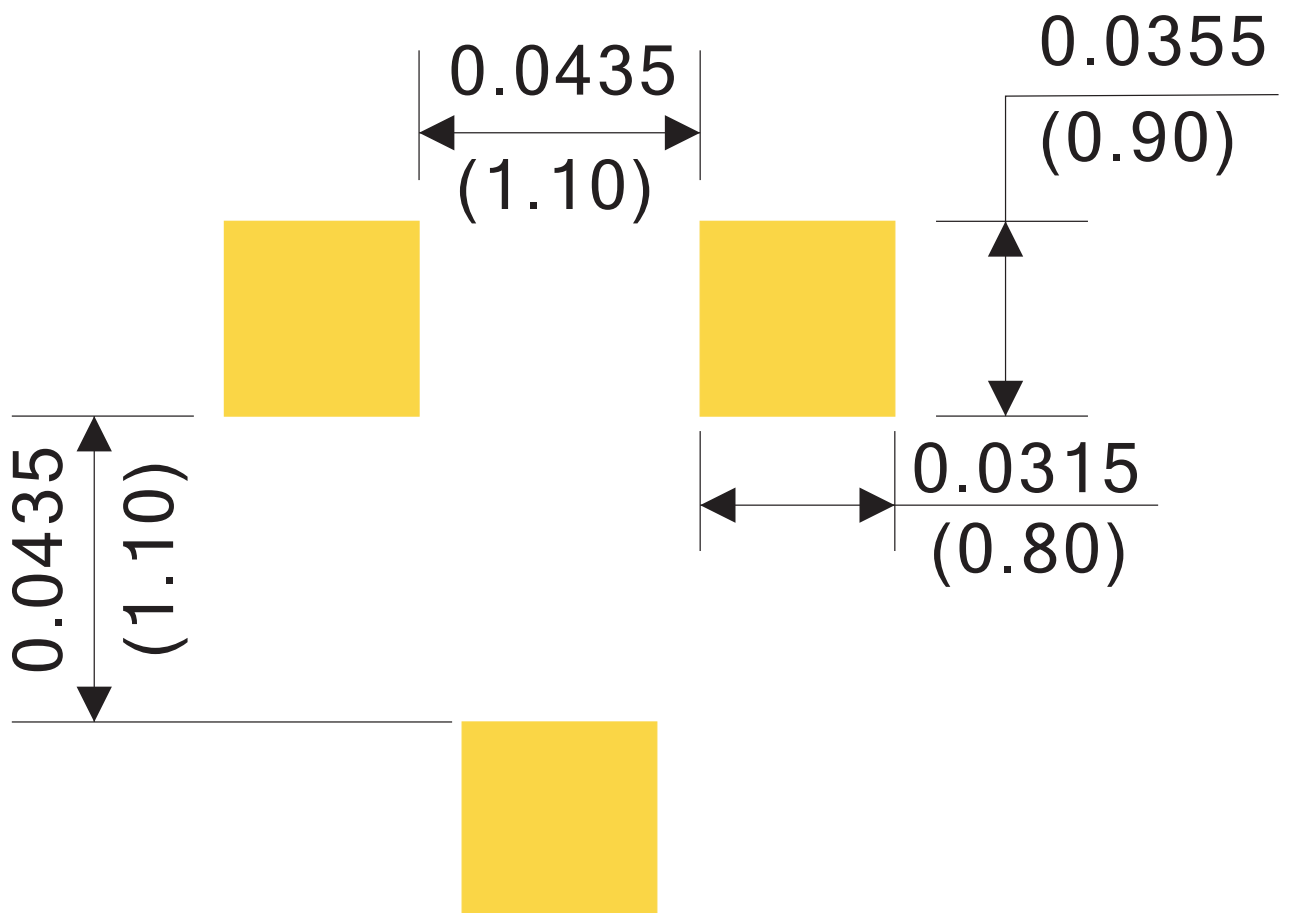
SOT-23



Dimensions in inches and (millimeters)

Suggested Soldering Pad Layout

SOT-23

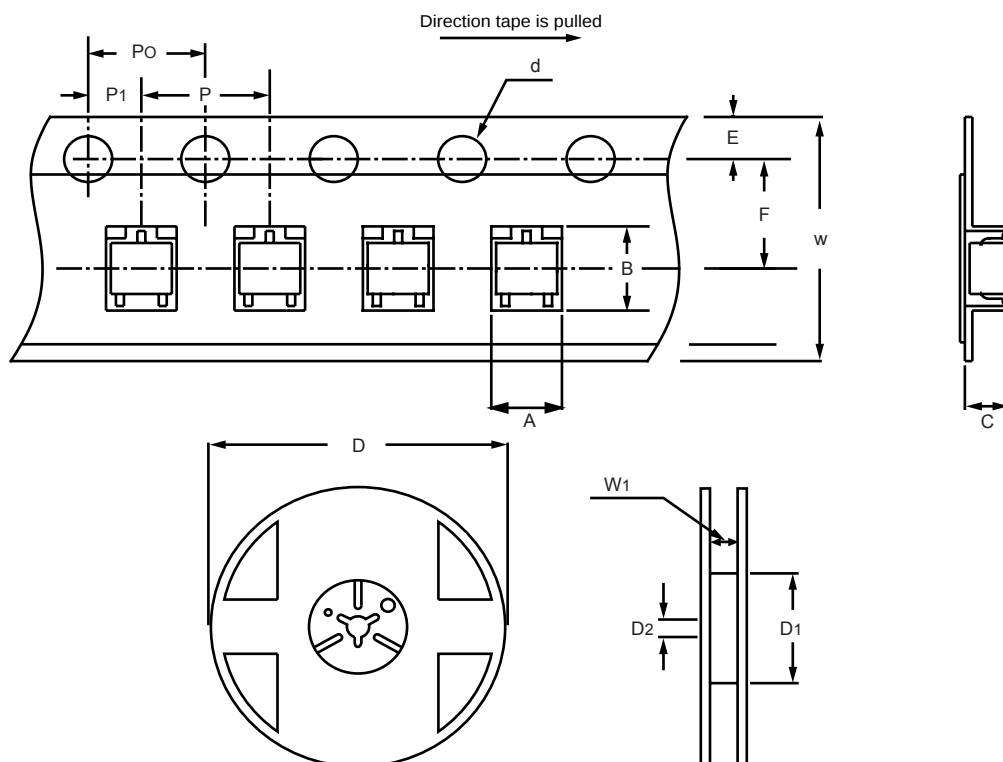


Dimensions in inches and (millimeters)

Reel Taping Sepecification - Surface Mount Device/SOT-23

Reel Packing

PACKAGE	PER REEL EA	REEL DIA (m/m)	BOX SIZE (m/m)	PER BOX EA	CARTION (m/m)	PER CARTION EA	GROSS WEIGHT (Kg)
SOT-23	3,000	178	192*195*136	30,000	440*410*410	360,000	15.0



ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Carrier width	A	3.1±0.1	0.122±0.004
Carrier length	B	2.85±0.1	0.112±0.004
Carrier depth	C	1.40±0.1	0.055±0.004
Sprocket hole	d	1.5 + 0.1/-0	0.059 + 0.004/-0
Reel outside diameter	D	180 + 0/-3	7.083 + 0/-0.118
Reel inner diameter	D1	60 + 1/-0	2.361 + 0.039/-0
Feed hole diameter	D2	13±0.2	0.512±0.008
Sprocket hole position	E	1.75±0.1	0.069±0.004
Punch hole position	F	3.5±0.05	0.138±0.002
Punch hole pitch	P	4.0±0.1	0.157±0.004
Sprocket hole pitch	P0	4.0±0.1	0.157±0.004
Embossment center	P1	2.0±0.05	0.079±0.002
Tape width	W	8.0±0.2	0.315±0.008
Reel width	W1	9.0±0.3	0.354±0.012

NOTE: 1.Devices are packed in accordance with EIAJ stand ETX-7001 and specifications listed above.

2.Available on 7 inch (3,000 c.t.) or 13 inch (10,000 c.t.) diameter reels.

Ordering Information:

Device PN	Packing
Part Number -T ⁽¹⁾ H ⁽²⁾ -Q ⁽³⁾	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

(2) RoHS product for packing code suffix "G" : Halogen free product for packing code suffix "H"

(3) Q : Quality brand abbreviation, Label Type does not display

Disclaimer

QUALITY reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. QUALITY or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on QUALITY data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. QUALITY does not assume any liability arising out of the application or use of any product or circuit.

QUALITY products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of QUALITY. Customers using or selling QUALITY components for use in such applications do so at their own risk and shall agree to fully indemnify QUALITY Inc and its subsidiaries harmless against all claims, damages and expenditures.