

Features

- Low Profile Package
- Ideal for Automated Placement
- Fully Automotive Qualified to AEC-Q101
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings(@ 25°C Unless Otherwise Specified)

Parameter	Symbol	Rating	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$	P_D	1	W
Maximum Instantaneous Forward Voltage@ $I_F = 200\text{mA}$	V_F	1.2	V
Operating Junction Temperature Range	T_J	-55~175	°C
Storage Temperature Range	T_{stg}	-55~175	°C

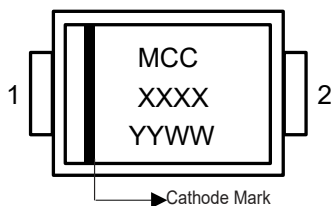
Thermal Characteristics(@ 25°C Unless Otherwise Specified)

Parameter	Symbol	Rating	Unit
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	100	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	120	°C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	30	°C/W

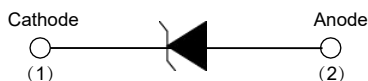
Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.4" x 0.4" (10 mm x 10 mm) copper pad areas

Simplified outline



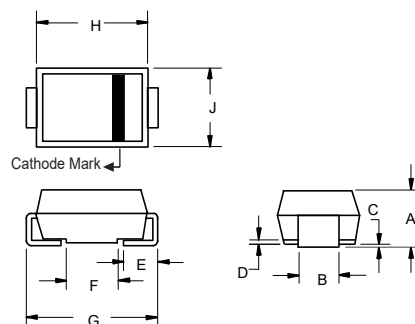
Graphic symbol



XXXX = Marking code YYWW = Date Code

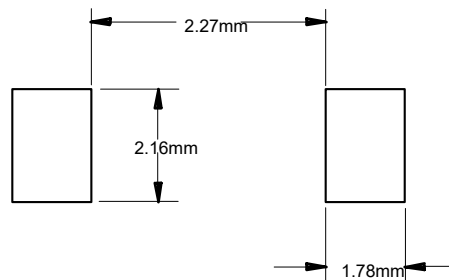
1 Watt Zener Diode 6.2 to 100 Volts

SMA (DO-214AC) LEAD FRAME



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

Part Number	Nominal Zener Voltage			Test Current	Maximum Dynamic Impedance Resistance			Maximum Reverse leakage Current		Maximum DC Zener Current	Marking Code		
	VZ@IZT				IZT	ZZT at IZT	ZZK at IZK	IZK	IR			VR	IZM
	Min(V)	Nom(V)	Max(V)		mA	Ω	Ω	mA	μA			V	mA
SMAJ4735AQ	5.89	6.2	6.51	41.00	2.0	700	1.00	10.0	3.0	146.0	735A		
SMAJ4736AQ	6.46	6.8	7.14	37.00	3.5	700	1.00	10.0	4.0	133.0	736A		
SMAJ4737AQ	7.13	7.5	7.88	34.00	4.0	700	0.50	10.0	5.0	121.0	737A		
SMAJ4738AQ	7.79	8.2	8.61	31.00	4.5	700	0.50	10.0	6.0	110.0	738A		
SMAJ4739AQ	8.65	9.1	9.56	28.00	5.0	700	0.50	10.0	7.0	100.0	739A		
SMAJ4740AQ	9.50	10.0	10.50	25.00	7.0	700	0.25	10.0	7.6	91.0	740A		
SMAJ4741AQ	10.45	11.0	11.55	23.00	8.0	700	0.25	5.0	8.4	83.0	741A		
SMAJ4742AQ	11.40	12.0	12.60	21.00	9.0	700	0.25	5.0	9.1	76.0	742A		
SMAJ4743AQ	12.35	13.0	13.65	19.00	10.0	700	0.25	5.0	9.9	69.0	743A		
SMAJ4744AQ	14.25	15.0	15.75	17.00	14.0	700	0.25	5.0	11.4	61.0	744A		
SMAJ4745AQ	15.20	16.0	16.80	15.50	16.0	700	0.25	5.0	12.2	57.0	745A		
SMAJ4746AQ	17.10	18.0	18.90	14.00	20.0	750	0.25	5.0	13.7	50.0	746A		
SMAJ4747AQ	19.00	20.0	21.00	12.50	22.0	750	0.25	5.0	15.2	45.0	747A		
SMAJ4748AQ	20.90	22.0	23.10	11.50	23.0	750	0.25	5.0	16.7	41.0	748A		
SMAJ4749AQ	22.80	24.0	25.20	10.50	25.0	750	0.25	5.0	18.2	38.0	749A		
SMAJ4750AQ	25.65	27.0	28.35	9.50	35.0	750	0.25	5.0	20.6	34.0	750A		
SMAJ4751AQ	28.50	30.0	31.50	8.50	40.0	1000	0.25	5.0	22.8	30.0	751A		
SMAJ4752AQ	31.35	33.0	34.65	7.50	45.0	1000	0.25	5.0	25.1	27.0	752A		
SMAJ4753AQ	34.20	36.0	37.80	7.00	50.0	1000	0.25	5.0	27.4	25.0	753A		
SMAJ4754AQ	37.05	39.0	40.95	6.50	60.0	1000	0.25	5.0	29.7	23.0	754A		
SMAJ4755AQ	40.85	43.0	45.15	6.00	70.0	1500	0.25	5.0	32.7	22.0	755A		
SMAJ4756AQ	44.65	47.0	49.35	5.50	80.0	1500	0.25	5.0	35.8	19.0	756A		
SMAJ4757AQ	48.45	51.0	53.55	5.00	95.0	1500	0.25	5.0	38.8	18.0	757A		
SMAJ4758AQ	53.20	56.0	58.80	4.50	110.0	2000	0.25	5.0	42.6	16.0	758A		
SMAJ4759AQ	58.90	62.0	65.10	4.00	125.0	2000	0.25	5.0	47.1	14.0	759A		
SMAJ4760AQ	64.60	68.0	71.40	3.70	150.0	2000	0.25	5.0	51.7	13.0	760A		
SMAJ4761AQ	71.25	75.0	78.75	3.30	175.0	2000	0.25	5.0	56.0	12.0	761A		
SMAJ4762AQ	77.90	82.0	86.10	3.00	200.0	3000	0.25	5.0	62.2	11.0	762A		
SMAJ4763AQ	86.45	91.0	95.55	2.80	250.0	3000	0.25	5.0	69.2	10.0	763A		
SMAJ4764AQ	95.00	100.0	105.00	2.50	350.0	3000	0.25	5.0	76.0	9.0	764A		

Curve Characteristics

Fig. 1 - Power Derating Curve

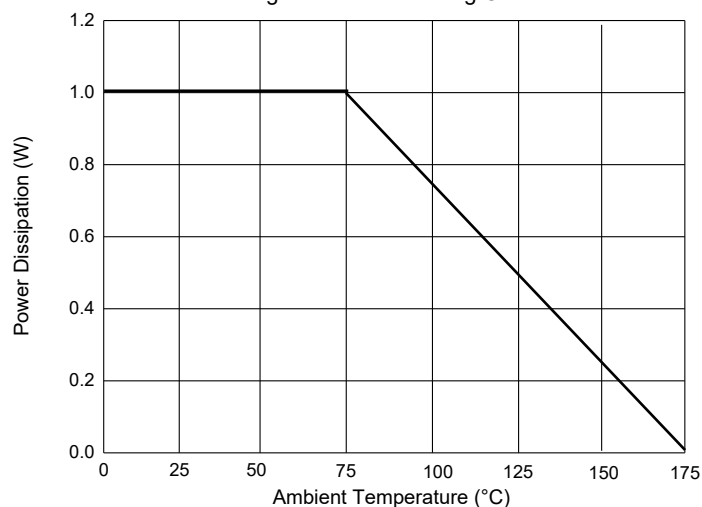


Fig. 2 - Typical Forward Characteristics

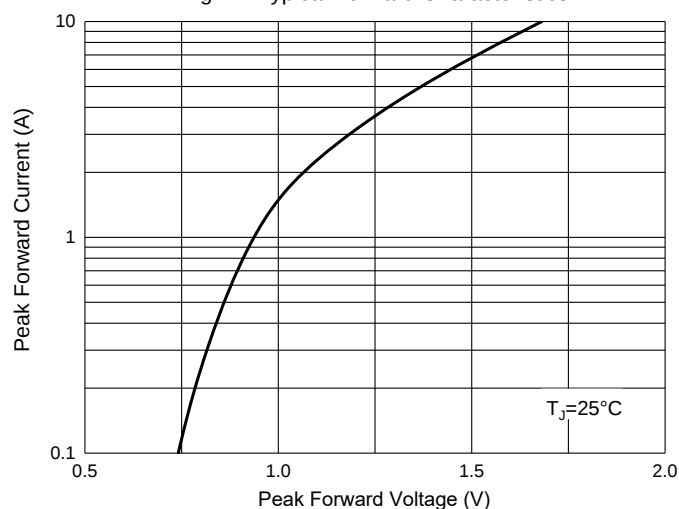


Fig. 3 - Pulse Waveform

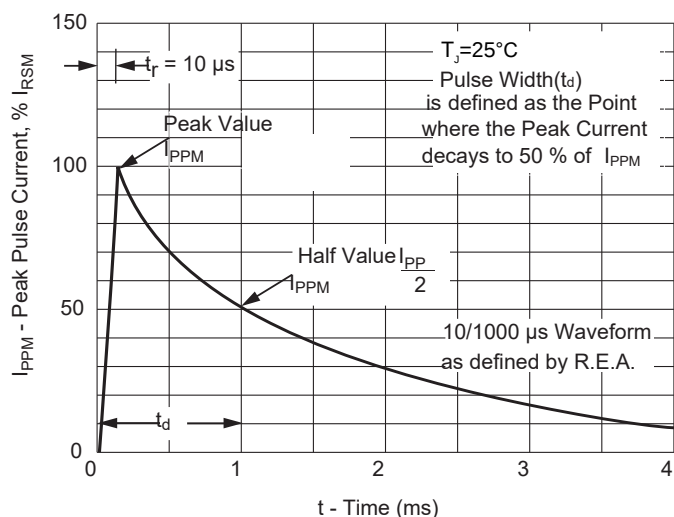
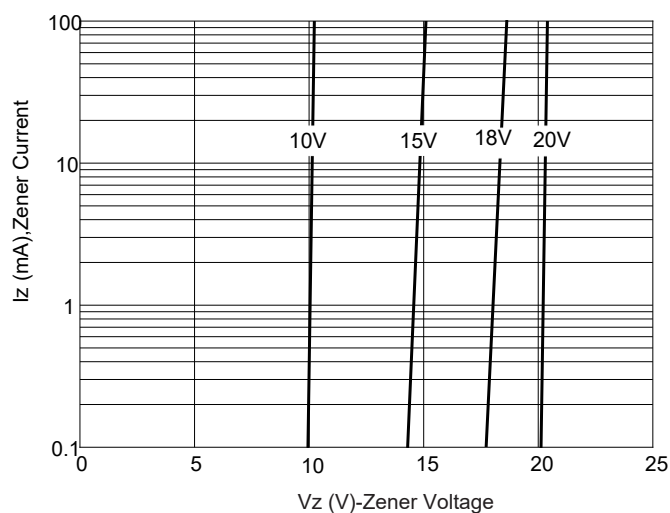


Fig.4 -Typical Zener Breakdown Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:7.5Kpcs/Reel

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<u>SMAJ4751AQ-TP</u>	<u>SMAJ4753AQ-TP</u>	<u>SMAJ4749AQ-TP</u>	<u>SMAJ4752AQ-TP</u>	<u>SMAJ4758AQ-TP</u>	<u>SMAJ4744AQ-TP</u>
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