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3WATT SURFACE MOUNT ZENER DIODE

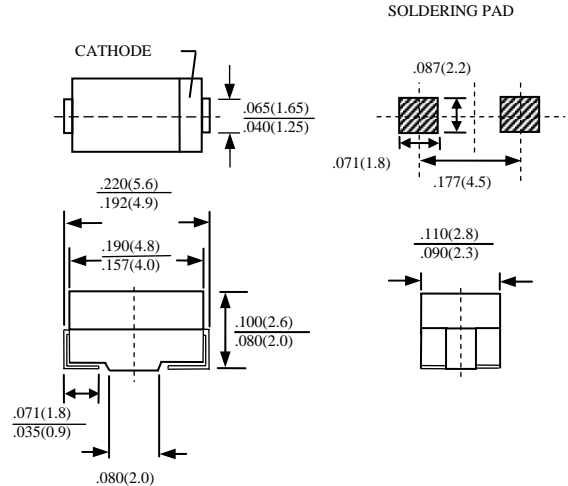
ZS30-10C THRU ZS30-270C

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- LOW ZENER IMPEDANCE
- EXCELLENT CLAMPING CAPABILITY

MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO-214AC (SMA), DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED
- POLARITY: INDICATED BY CATHODE BAND
- WEIGHT: 0.064 GRAMS



ABSOLUTE MAXIMUM RATINGS

Tamb = 25°C, UNLESS OTHERWISE SPECIFIED

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
POWER DISSIPATION	$R_{thJA} < 25K/W$, Tamb = 100°C	Pdiss	3	W
	$R_{thJA} < 100K/W$, Tamb = 50°C	Pdiss	1.25	W
NON REPETITIVE PEAK SURGE POWER DISSIPATION	Tp = 100us sq.pulse , Jj = 25°C Prior to surge	Pzsm	600	W
JUNCTION TEMPERATURE		Tj	150	°C
STORAGE TEMPERATURE RANGE		Tstg	-55TO + 150	°C

THERMAL CHARACTERISTICS

Tamb = 25°C, UNLESS OTHERWISE SPECIFIED

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
JUNCTION LEAD		R_{thJL}	25	K/W
JUNCTION AMBIENT	Mounted on epoxy-glass hard tissue , Fig.1a	R_{thJA}	150	K/W
	Mounted on epoxy-glass hard tissue , Fig.1b	R_{thJA}	125	K/W
	Mounted on Al-oxid-ceramic(Al_2O_3) , Fig.1b	R_{thJA}	100	K/W

ELECTRICAL CHARACTERISTICS

Tamb = 25°C, UNLESS OTHERWISE SPECIFIED

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
FORWARD VOLTAGE	IF = 0.5A	VF	1.2	V

ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED) VF=1.2V MAX, IF = 500mA FOR ALL TYPES

TYPE	ZENER BREAKDOWN VOLTAGE			DYNAMIC IMPEDANCES @ 25°C T _A		MAXIMUM REVERSE CURRENT @ MEASUREMENT VOLTAGE AND 25°C T _A	
	V _Z @ I _{ZT}			Z _{ZT}	I _{ZT}	I _R	V _R
	MIN.	TYP.	MAX.	Ohms	mA	μA	V
ZS30-10C	9.4	10	10.6	4	50	7	7.5
ZS30-11C	10.4	11	11.6	7	50	4	8.2
ZS30-12C	11.4	12	12.7	7	50	3	9.1
ZS30-13C	12.4	13	14.1	10	50	2	10
ZS30-15C	13.8	15	15.6	10	50	1	11
ZS30-16C	15.3	16	17.1	15	25	1	12
ZS30-18C	16.8	18	19.1	15	25	1	13
ZS30-20C	18.8	20	21.2	15	25	1	15
ZS30-22C	20.8	22	23.3	15	25	1	16
ZS30-24C	22.8	24	25.6	15	25	1	18
ZS30-27C	25.1	27	28.9	15	25	1	20
ZS30-30C	28	30	32	15	25	1	22
ZS30-33C	31	33	35	15	25	1	24
ZS30-36C	34	36	38	40	10	1	27
ZS30-39C	37	39	41	40	10	1	30
ZS30-43C	40	43	46	45	10	1	33
ZS30-47C	44	47	50	45	10	1	36
ZS30-51C	48	51	54	60	10	1	39
ZS30-56C	52	56	60	60	10	1	43
ZS30-62C	58	62	66	80	10	1	47
ZS30-68C	64	68	72	80	10	1	51
ZS30-75C	70	75	79	100	10	1	56
ZS30-82C	77	82	87	100	10	1	62
ZS30-91C	85	91	96	200	5	1	68
ZS30-100C	94	100	106	200	5	1	75
ZS30-110C	104	110	116	250	5	1	82
ZS30-120C	114	120	127	250	5	1	91
ZS30-130C	124	130	141	300	5	1	100
ZS30-150C	138	150	156	300	5	1	110
ZS30-160C	153	160	171	350	5	1	120
ZS30-180C	168	180	191	400	5	1	130
ZS30-200C	188	200	212	500	5	1	150
ZS30-220C	208	220	233	750	2	1	160
ZS30-240C	228	240	256	850	2	1	180
ZS30-270C	251	270	289	1000	2	1	200

NOTE: SUFFIX "C" ±6%

RATING AND CHARACTERISTIC CURVES ZS30-10C THRU ZS30-270C

FIG. 1 – BOARDS FOR R_{thJA} DEFINITION
(COPPER OVERLAY 35u)

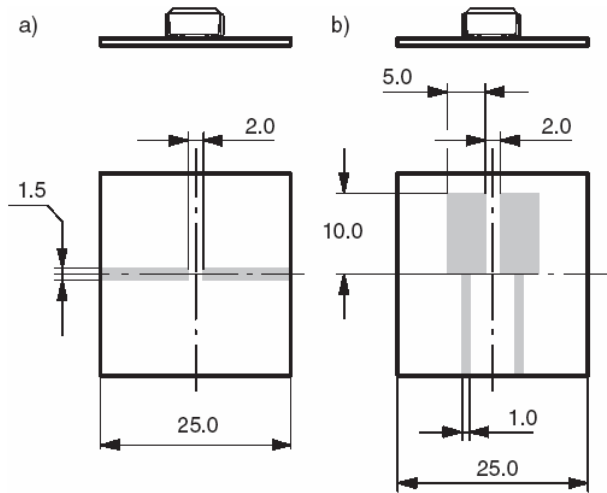


FIG. 2 – TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

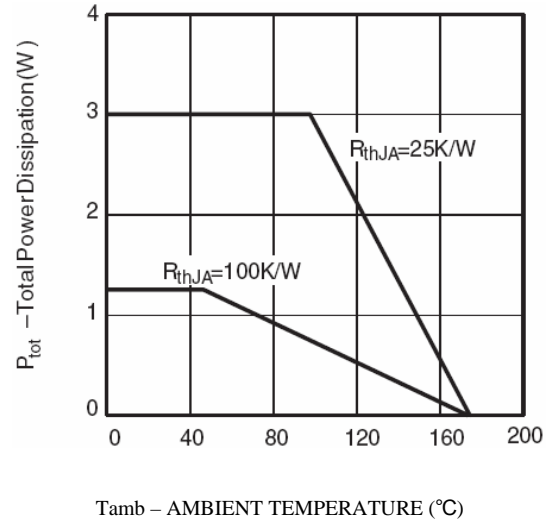


FIG. 3 – FORWARD CURRENT VS. FORWARD VOLTAGE

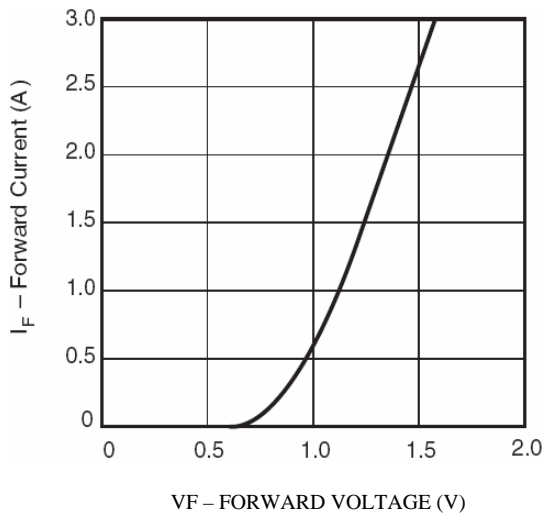


FIG. 4 – NON REPETITIVE SURGE POWER DISSIPATION VS. PULSE LENGTH

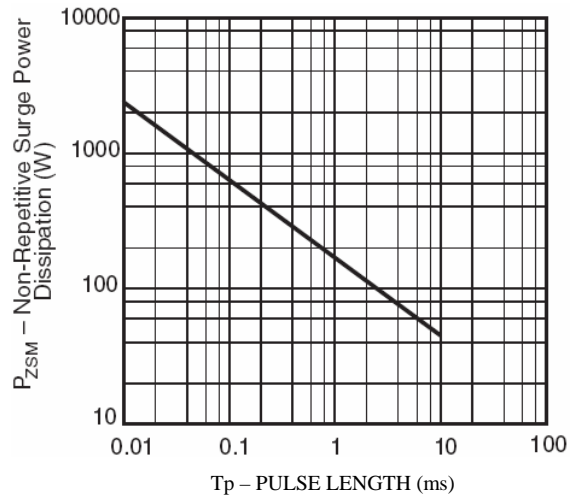


FIG. 5 – THERMAL RESPONSE

