

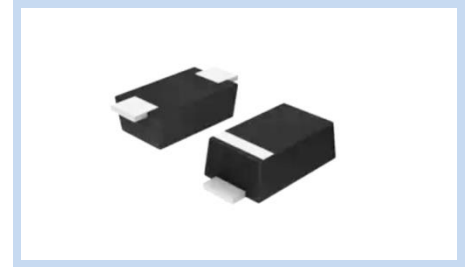
ESD Suppressor 5V~170V SOD-123F

MExxU(B)S123F Series

MERITEK

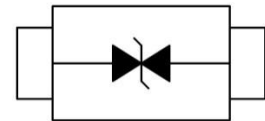
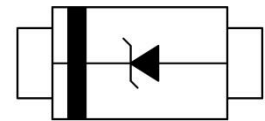
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{KV}$ (Air) $\pm 30\text{KV}$ (Contact)
- ESD Protection for one Unidirectional (Bidirectional) Channel
- Low Leakage Current
- Solid-State Silicon-Avalanche Technology



APPLICATION

- Power Management Systems
- Personal Digital Assistants (PDA)
- Cellular Handsets & Accessories
- Portable Devices
- Notebooks, Desktops and Servers
- High Definition Multimedia Interface (HDMI)
- USB Interface
- SATA Interface



MAXIMUM RATINGS AND CHARACTERISTICS

Parameter	Symbol	Value	Unit
ESD Voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD Voltage (Air discharge)		± 30	
Peak Pulse Power ($t_p=10/1000\mu\text{s}$)	P_{PP}	200	W
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	1000	W
Operating & Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Part Number	Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage at I_T		Test Current	Maximum Clamping Voltage at I_{PP}	Peak Pulse Current	Reverse Leakage at V_{RWM}
	UNI	BI	V_{RWM} (V)	$V_{BR\ MIN.}$ (V)	$V_{BR\ MAX.}$ (V)	I_T (mA)	V_C (V)	I_{PP} (A)	I_R (μA)
ME51U(B)9V2S123F	KE	AE	5.0	6.40	7.00	10	9.2	21.8	800
ME61U(B)10V3S123F	KG	AG	6.0	6.67	7.37	10	10.3	19.4	800
ME6V51U(B)S123F	KK	AK	6.5	7.22	7.98	10	11.2	17.9	500
ME71U(B)12S123F	KM	AM	7.0	7.78	8.60	10	12.0	16.7	200
ME7V51U(B)S123F	KP	AP	7.5	8.33	9.21	1	12.9	15.5	100

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Part Number	Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage at I_T		Test Current	Maximum Clamping Voltage at I_{PP}	Peak Pulse Current	Reverse Leakage at V_{RWM}
	UNI	BI	V_{RWM} (V)	V_{BR} MIN. (V)	V_{BR} MAX. (V)	I_T (mA)	V_C (V)	I_{PP} (A)	I_R (μ A)
ME81U(B)13V6S123F	KR	AR	8.0	8.89	9.83	1	13.6	14.7	50
ME8V51U(B)S123F	KT	AT	8.5	9.44	10.40	1	14.4	13.9	20
ME91U(B)15V4S123F	KV	AV	9.0	10.00	11.10	1	15.4	13.0	10
ME101U(B)17S123F	KX	AX	10.0	11.10	12.30	1	17.0	11.8	5
ME111U(B)18V2S123F	KZ	AZ	11.0	12.20	13.50	1	18.2	11.0	3
ME121U(B)19V9S123F	LE	BE	12.0	13.30	14.70	1	19.9	10.1	1
ME131U(B)21V5S123F	LG	BG	13.0	14.40	15.90	1	21.5	9.3	1
ME141U(B)23V2S123F	LK	BK	14.0	15.60	17.20	1	23.2	8.6	1
ME151U(B)24V4S123F	LM	BM	15.0	16.70	18.50	1	24.4	8.2	1
ME161U(B)26S123F	LP	BP	16.0	17.80	19.70	1	26.0	7.7	1
ME171U(B)27V6S123F	LR	BR	17.0	18.90	20.90	1	27.6	7.3	1
ME181U(B)29V2S123F	LT	BT	18.0	20.00	22.10	1	29.2	6.9	1
ME201U(B)32V4S123F	LV	BV	20.0	22.20	24.50	1	32.4	6.2	1
ME221U(B)35V5S123F	LX	BX	22.0	24.40	26.90	1	35.5	5.7	1
ME241U(B)38V9S123F	LZ	BZ	24.0	26.70	29.50	1	38.9	5.2	1
ME261U(B)42V1S123F	ME	CE	26.0	28.90	31.90	1	42.1	4.8	1
ME281U(B)45V4S123F	MG	CG	28.0	31.10	34.40	1	45.4	4.4	1
ME301U(B)48V4S123F	MK	CK	30.0	33.30	36.80	1	48.4	4.2	1
ME331U(B)53V3S123F	MM	CM	33.0	36.70	40.60	1	53.3	3.8	1
ME361U(B)58V1S123F	MP	CP	36.0	40.00	44.20	1	58.1	3.5	1
ME401U(B)64V5S123F	MR	CR	40.0	44.40	49.10	1	64.5	3.1	1
ME431U(B)69V4S123F	MT	CT	43.0	47.80	52.80	1	69.4	2.9	1
ME451U(B)72V7S123F	MV	CV	45.0	50.00	55.30	1	72.7	2.8	1
ME481U(B)77V4S123F	MX	CX	48.0	53.30	58.90	1	77.4	2.6	1
ME511U(B)82V4S123F	MZ	CZ	51.0	56.70	62.70	1	82.4	2.5	1
ME541U(B)87V1S123F	NE	DE	54.0	60.00	66.30	1	87.1	2.3	1
ME581U(B)93V6S123F	NG	DG	58.0	64.40	71.20	1	93.6	2.3	1
ME601U(B)96V8S123F	NK	DK	60.0	66.70	73.70	1	96.8	2.1	1
ME641U(B)103S123F	NM	DM	64.0	71.10	78.60	1	103.0	2.0	1
ME701U(B)113S123F	NP	DP	70.0	77.80	86.00	1	113.0	1.8	1
ME751U(B)121S123F	NR	DR	75.0	83.30	92.10	1	121.0	1.7	1
ME781U(B)126S123F	NT	DT	78.0	86.70	95.80	1	126.0	1.6	1
ME851U(B)137S123F	NV	DV	85.0	94.40	104.00	1	137.0	1.5	1
ME901U(B)146S123F	NX	DX	90.0	100.00	111.00	1	146.0	1.4	1

ELECTRICAL CHARACTERISTICS

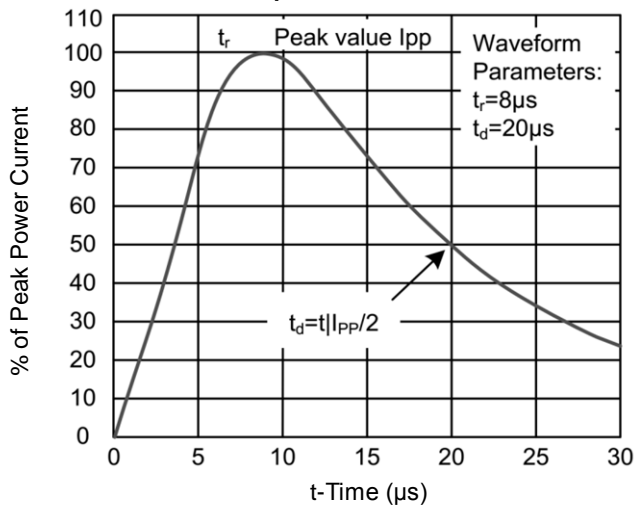
Part Number	Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage at I_T		Test Current	Maximum Clamping Voltage at I_{PP}	Peak Pulse Current	Reverse Leakage at V_{RWM}
	UNI	BI		V_{RWM} (V)	V_{BR} MIN. (V)				
ME1001U(B)162S123F	NZ	DZ	100.0	111.00	123.00	1	162.0	1.3	1
ME1101U(B)177S123F	PE	EE	110.0	122.00	135.00	1	177.0	1.2	1
ME1201U(B)193S123F	PG	EG	120.0	133.00	147.00	1	193.0	1.1	1
ME1301U(B)209S123F	PK	EK	130.0	144.00	159.00	1	209.0	1.0	1
ME1501U(B)243S123F	PM	EM	150.0	167.00	185.00	1	243.0	0.8	1
ME1601U(B)259S123F	PP	EP	160.0	178.00	197.00	1	259.0	0.8	1
ME1701U(B)275S123F	PR	ER	170.0	189.00	209.00	1	275.0	0.8	1

Notes:

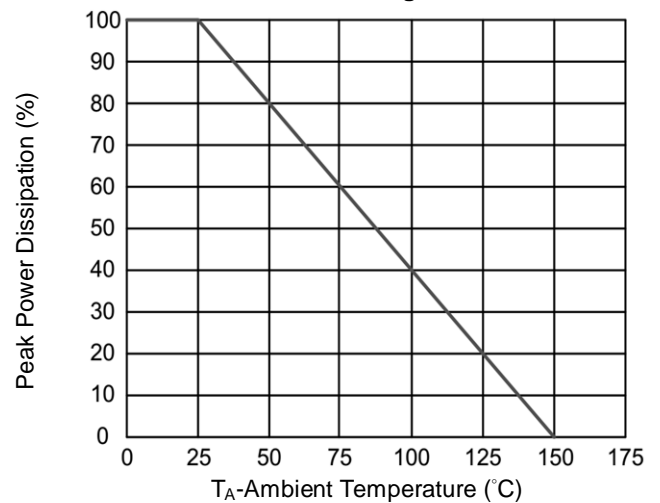
1. $T_J = 25^\circ\text{C}$ unless otherwise specified

CHARACTERISTIC CURVES

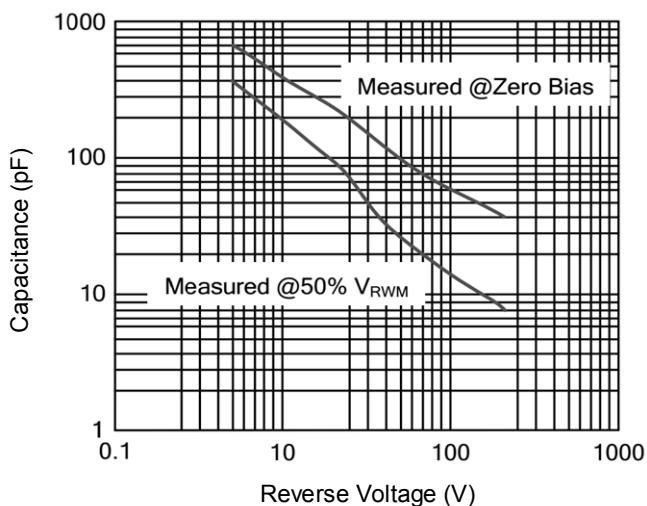
8/20 μ s Pulse Waveforms



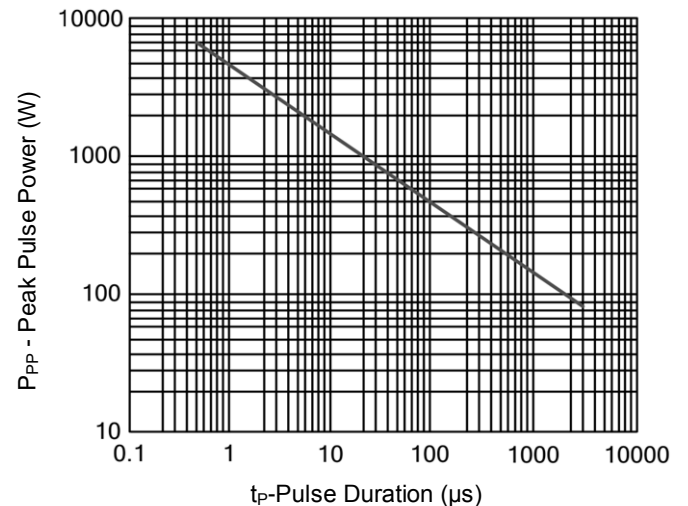
Power Derating Curve



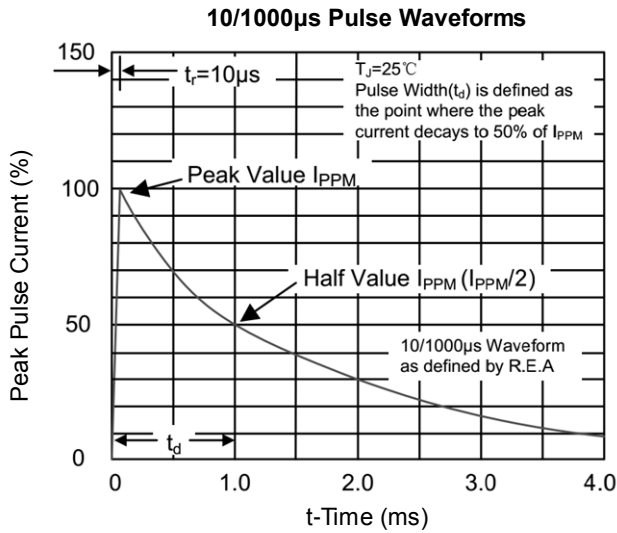
Capacitance vs. Reverse Voltage



Peak Pulse Power Rating Curve

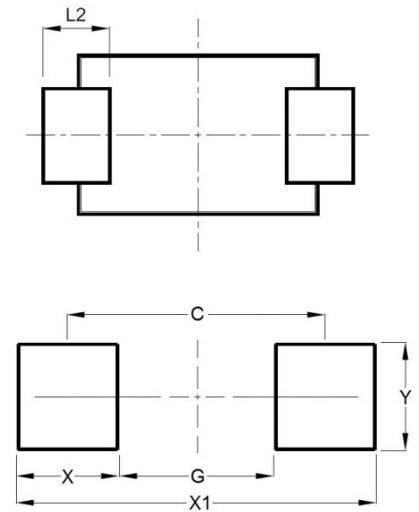
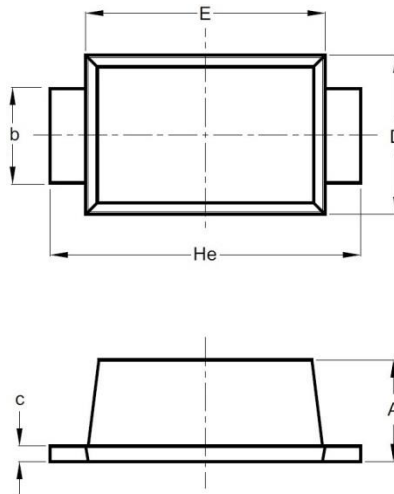


CHARACTERISTIC CURVES



DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.90	1.40
b	0.75	1.10
C	0.12	0.22
D	1.60	2.00
E	2.60	3.00
He	3.50	3.90
L2	0.80	0.80
C	2.80	2.80
G	1.50	1.50
X	1.30	1.30
X1	4.20	4.20
Y	1.80	1.80



*Specifications subject to change without notice.