MXTA92
MXTA93

CASE 345-01, STYLE 1
SOT-89

HIGH VOLTAGE TRANSISTOR

PNP SILICON

Refer to MPSA92 for graphs.

MAXIMUM RATINGS

Rating	Symbol	MPS-A92	MPS-A93	Unit
Collector-Emitter Voltage	V_{CEO}	300	200	Vdc
Collector-Base Voltage	V_{CBO}	300	200	Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current — Continuous	I_C	500		mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T_A = 25°C Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	125	°C/W

*Package mounted on 99.5% alumina 10 x 12 x 0.6 mm.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage(1) (I_C = 1.0 mAdc, I_B = 0)	 MXTA92 MXTA93	$V_{(BR)CEO}$	 300 200	 — —	Vdc
Collector-Base Breakdown Voltage (I_C = 100 μAdc, I_E = 0)	 MXTA92 MXTA93	$V_{(BR)CBO}$	 300 200	 — —	Vdc
Emitter-Base Breakdown Voltage (I_E = 100 μAdc, I_C = 0)		$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current (V_{CB} = 200 Vdc, I_E = 0) (V_{CB} = 160 Vdc, I_E = 0)	 MXTA92 MXTA93	I_{CBO}	 — —	 0.25 0.25	μAdc
Emitter Cutoff Current (V_{BE} = 3.0 Vdc, I_C = 0)		I_{EBO}	—	0.1	μAdc
ON CHARACTERISTICS(1)					
DC Current Gain (I_C = 1.0 mAdc, V_{CE} = 10 Vdc) (I_C = 10 mAdc, V_{CE} = 10 Vdc) (I_C = 30 mAdc, V_{CE} = 10 Vdc)	 Both Types Both Types MXTA92 MXTA93	h_{FE}	 25 40 25 25	 — — — 150	—
Collector-Emitter Saturation Voltage (I_C = 20 mAdc, I_B = 2.0 mAdc)	 MXTA92 MXTA93	$V_{CE(sat)}$	 — —	 0.5 0.5	Vdc
Base-Emitter Saturation Voltage (I_C = 20 mAdc, I_B = 2.0 mAdc)		$V_{BE(sat)}$	—	0.9	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 10 mAdc, V_{CE} = 20 Vdc, f = 100 MHz)		f_T	50	—	MHz
Collector-Base Capacitance (V_{CB} = 20 Vdc, I_E = 0, f = 1.0 MHz)	 MXTA92 MXTA93	C_{cb}	 — —	 6.0 8.0	pF

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.