MXTA27

CASE 345-01, STYLE 1
SOT-89

DARLINGTON TRANSISTOR

NPN SILICON

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CES}	60	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Current — Continuous	I_C	500	mA

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.

Refer to MPSA25 for graphs.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C = 100 μA)	$V_{(BR)CES}$	60	—	V
Collector-Base Breakdown Voltage (I_C = 100 μA)	$V_{(BR)CBO}$	60	—	V
Collector Cutoff Current (V_{CB} = 50 V)	I_{CBO}	—	100	nA
Collector Cutoff Current (V_{CE} = 50 V)	I_{CES}	—	500	nA
Emitter Cutoff Current (V_{BE} = 10 V)	I_{EBO}	—	100	nA
ON CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C = 100 mA, I_B = 0.1 A)	V_{CES}	—	1.5	V
Base-Emitter On Voltage (I_C = 100 mA, V_{CE} = 5.0 V)	$V_{BE(on)}$	—	2.0	V
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain (I_C = 10 mA, V_{CE} = 5.0 V) (I_C = 100 mA, V_{CE} = 5.0 V)	h_{FE}	 10 K 10 K	 — —	—
Current Gain — High Frequency (I_C = 10 mA, V_{CE} = 5.0 V, f = 100 MHz)	$\|h_{fe}\|$	1.25	—	—