

MXTA14**CASE 345-01, STYLE 1
SOT-89****DARLINGTON TRANSISTOR****NPN SILICON**

Refer to 2N6426 for graphs.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	30	V
Collector-Emitter Voltage	V_{CES}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Current — Continuous	I_C	300	mA

THERMAL CHARACTERISTICS

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

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

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 100\ \mu\text{A}$)	$V_{(BR)CES}$	30	—	V
Collector Cutoff Current ($V_{CB} = 30$)	I_{CBO}	—	100	nA
Emitter Cutoff Current ($V_{BE} = 10\ \text{V}$)	I_{EBO}	—	100	nA

ON CHARACTERISTICS

DC Current Gain(1) ($I_C = 10\ \text{mA}$, $V_{CE} = 5.0\ \text{V}$) ($I_C = 100\ \text{mA}$, $V_{CE} = 5.0\ \text{V}$)	h_{FE}	10 K 20 K	— —	—
Collector-Emitter Saturation Voltage(1) ($I_C = 100\ \text{mA}$, $I_B = 0.1\ \text{mA}$)	$V_{CE(sat)}$	—	1.5	V
Base-Emitter On Voltage ($I_C = 100\ \text{mA}$, $V_{CE} = 5.0\ \text{V}$)	$V_{BE(on)}$	—	2.0	V

SMALL-SIGNAL CHARACTERISTICS

Current-Gain — Bandwidth Product ($V_{CE} = 5.0\ \text{V}$, $I_C = 10\ \text{mA}$, $f = 100\ \text{MHz}$)	f_T	125	—	MHz
--	-------	-----	---	-----

(1) Pulse Test: Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 2.0\ \%$.