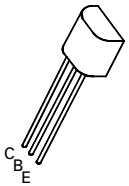
NPN SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

MPSA12

ISSUE 2 – SEPT 93

FEATURES

* 1 Watt power dissipation
* 1 Amp continuous current
* Minimum gain =8K at 250mA



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	12	V
Peak Pulse Current	I_{CM}	2	A
Continuous Collector Current	I_C	1	A
Power Dissipation at T_{amb}=25°C	P_{tot}	1	W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +200	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	100			V	I_C=100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	100			V	I_C=100μA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	12			V	I_E=10μA, I_C=0
Collector Cut-Off Current	I_{CBO}			100	nA	V_{CB}=80V, I_E=0
Emitter Cut-Off Current	I_{EBO}			100	nA	V_{EB}=10V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.1	V	I_C=250mA, I_B=0.25mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			2	V	I_C=250mA, I_B=0.25mA
Static Forward Current Transfer Ratio	h_{FE}	10K 8K				I_C=100mA, V_{CE}=5V* I_C=250mA, V_{CE}=5V*
Transition Frequency	f_T	100			MHz	I_C=100mA, V_{CE}=5V f=20MHz

*Measured under pulsed conditions. Pulse width =300μs. Duty cycle ≤ 2%