

MPSA13, 14 Darlington TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25°C)}$$

Collector current

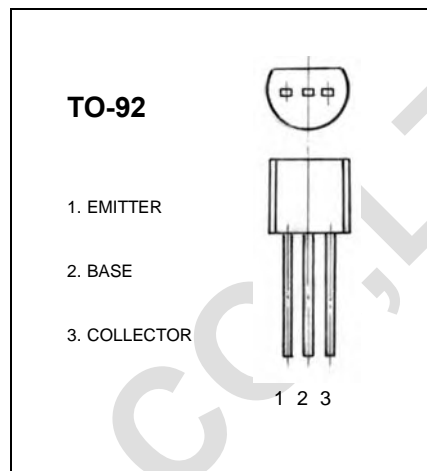
$$I_{CM}: 0.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 30 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55°C \text{ to } +150°C$$



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	10		V
Collector cut-off current	I_{CBO}	$V_{CB} = 30V, I_E = 0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 10V, I_C = 0$		0.1	μA
DC current gain	$H_{FE(1)}$ *	$V_{CE} = 5V, I_C = 10mA$ MPSA13 MPSA14	5000 10000		
	$H_{FE(2)}$ *	$V_{CE} = 5V, I_C = 100mA$ MPSA13 MPSA14	10000 20000		
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	$I_C = 100mA, I_B = 0.1mA$		1.5	V
Base-emitter voltage	$V_{BE(on)}$ *	$V_{CE} = 5V, I_C = 100mA$		2.0	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA, f = 100MHz$	125		MHz

* Pulse Test: pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.