

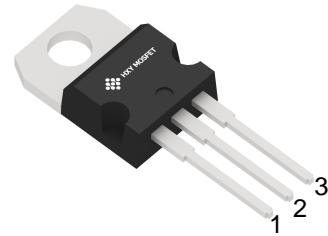


Features

- Monolithic Darlington configuration
- Integrated antiparallel collector-emitter diode

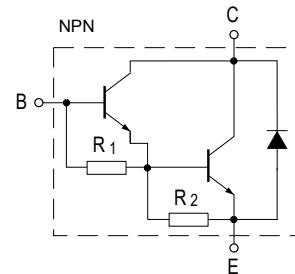
Maximum Ratings (Ta=25 °C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-base voltage (I _E = 0)	100	V
V _{CEO}	Collector-emitter voltage (I _B = 0)	100	V
V _{EBO}	Emitter-base voltage (I _C = 0)	5	V
I _C	Collector current	8	A
I _{CM}	Collector peak current	12	A
I _B	Base current	0.3	A
P _{TOT}	Total dissipation at T _{case} = 25 °C	70	W
T _{STG}	Storage temperature	-65 to 150	°C
T _J	Max. operating junction temperature	150	°C



TO-220S

1.BASE
2.COLLECTOR
3.EMITTER



R₁ typ. = 5 K R₂ typ. = 210

Electrical Characteristics (Ta=25 °C unless otherwise specified)

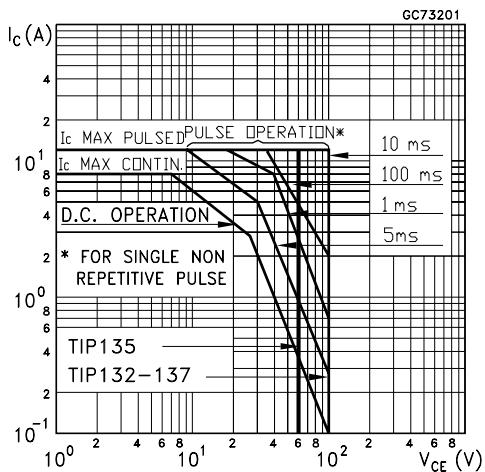
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = Half Rated V _{CEO}			0.5	mA
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = Rated V _{CBO}			0.2	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			5	mA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 30 mA for TIP135 for TIP132/TIP137	60 100			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 4 A I _B = 16 mA I _C = 6 A I _B = 30 mA			2 4	V
V _{BE} *	Base-Emitter Voltage	I _C = 4 A V _{CE} = 4 V			2.5	V
h _{FE} *	DC Current Gain	I _C = 1 A V _{CE} = 4 V I _C = 4 A V _{CE} = 4 V	500 1000		15000	

* Pulsed: Pulse duration = 300 µs, duty cycle 1.5 %
For PNP types voltage and current values are negative.

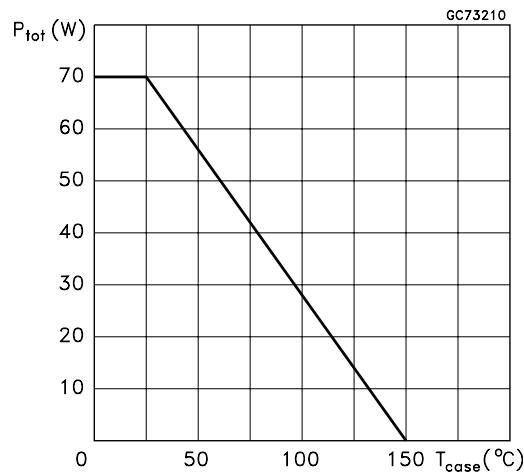


Typical Characteristics

Safe Operating Areas

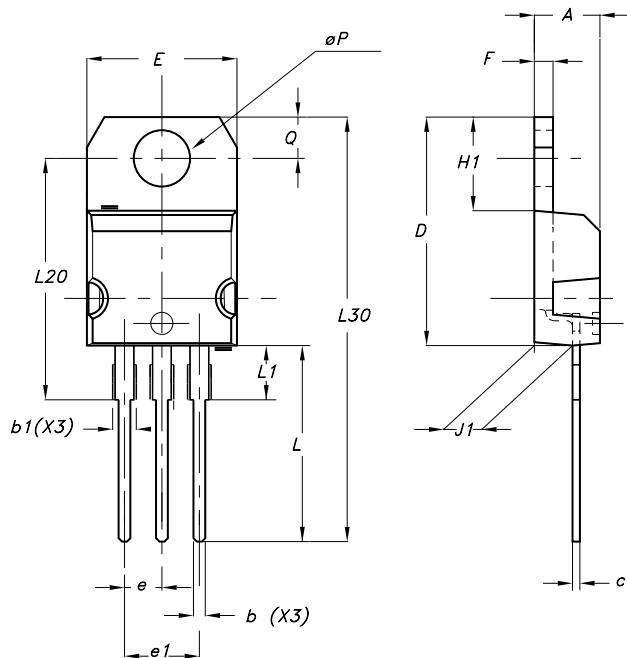


Power Derating Curve





Package Information TO-220S



DIM.	mm.			inch		
	MIN.	_TYP.	MAX.	MIN.	_TYP.	MAX.
A	4.40		4.60	0.173		0.181
b	0.61		0.88	0.024		0.034
b1	1.15		1.70	0.045		0.066
c	0.49		0.70	0.019		0.027
D	15.25		15.75	0.60		0.620
E	10		10.40	0.393		0.409
e	2.40		2.70	0.094		0.106
e1	4.95		5.15	0.194		0.202
F	1.23		1.32	0.048		0.052
H1	6.20		6.60	0.244		0.256
J1	2.40		2.72	0.094		0.107
L	13		14	0.511		0.551
L1	3.50		3.93	0.137		0.154
L20		16.40			0.645	
L30		28.90			1.137	
øP	3.75		3.85	0.147		0.151
Q	2.65		2.95	0.104		0.116



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