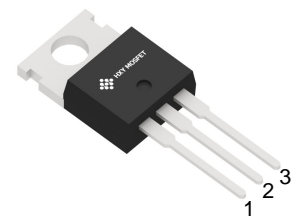




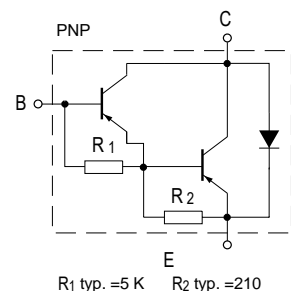
Application

- Linear and switching industrial equipment.



1.BASE
2.COLLECTOR
3.EMITTER

TO-220C



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-8	A
P_{tot}	Total Dissipation at $T_{case} \leq 25^\circ C$ $T_{amb} \leq 25^\circ C$	70 2	W W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	62.5	$^\circ C/W$
T_j, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^\circ C$

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

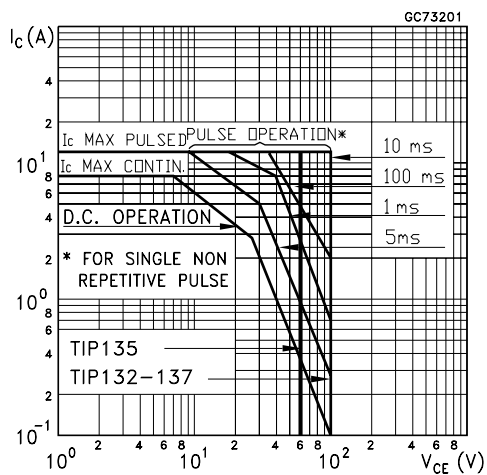
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = \text{Half Rated } V_{CEO}$			0.5	mA
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = \text{Rated } V_{CBO}$			0.2	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5 V$			5	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 30 \text{ mA}$ for	100			V V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 4 A$ $I_C = 6 A$			2 4	V V
V_{BE}^*	Base-Emitter Voltage	$I_C = 4 A$ $V_{CE} = 4 V$			2.5	V
h_{FE}^*	DC Current Gain	$I_C = 1 A$ $I_C = 4 A$	500 1000		15000	

* Pulsed: Pulse duration = 300 μs , duty cycle 1.5 %

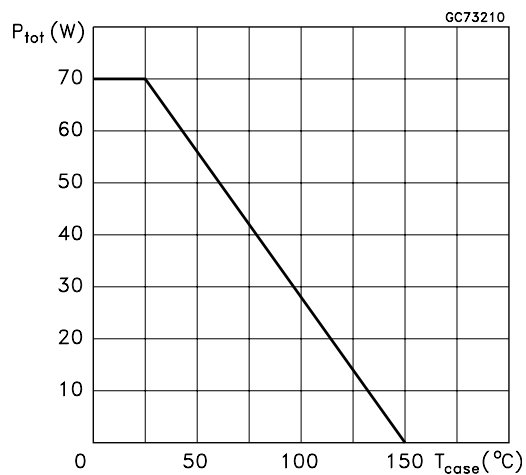


Typical Characteristics

Safe Operating Areas

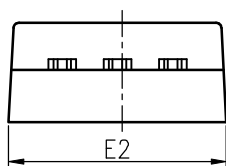
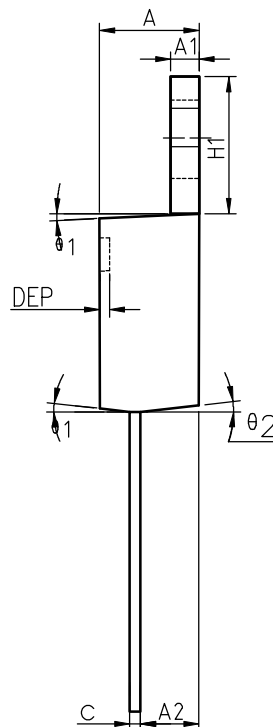
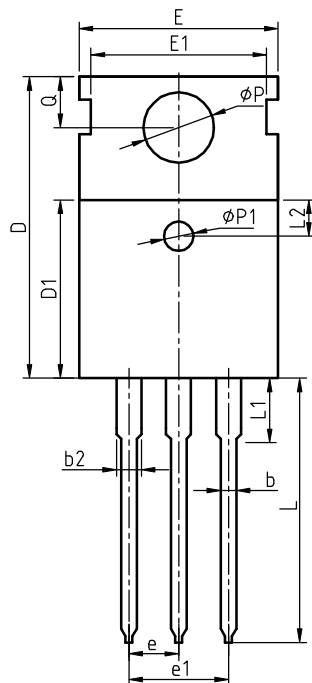


Power Derating Curve





Package Information
TO-220C



COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185
A1	1.27	1.30	1.33	0.050	0.051	0.052
A2	2.35	2.40	2.50	0.093	0.094	0.098
b	0.77	0.80	0.90	0.030	0.031	0.035
b2	1.17	1.27	1.36	0.046	0.050	0.054
c	0.48	0.50	0.56	0.019	0.020	0.022
D	15.40	15.60	15.80	0.606	0.614	0.622
D1	9.00	9.10	9.20	0.354	0.358	0.362
DEP	0.05	0.10	0.20	0.002	0.004	0.008
E	9.80	10.00	10.20	0.386	0.394	0.402
E1	-	8.70	-	-	0.343	-
E2	9.80	10.00	10.20	0.386	0.394	0.402
e		2.54	BSC		0.100	BSC
e1		5.08	BSC		0.200	BSC
H1	6.40	6.50	6.60	0.252	0.256	0.260
L	12.75	13.50	13.65	0.502	0.531	0.537
L1	-	3.10	3.30	-	0.122	0.130
L2		2.50	REF		0.098	REF
P	3.50	3.60	3.63	0.138	0.142	0.143
P1	3.50	3.60	3.63	0.138	0.142	0.143
Q	2.73	2.80	2.87	0.107	0.110	0.113
θ 1	5°	7°	9°	5°	7°	9°
θ 2	1°	3°	5°	1°	3°	5°
θ 3	1°	3°	5°	1°	3°	5°



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