

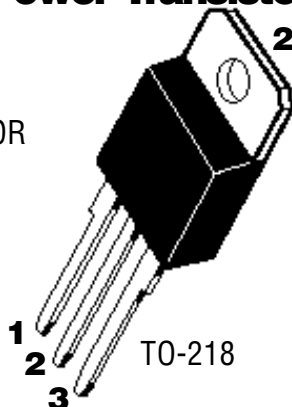


Complementary Silicon High Power Transistor

Description

TIP35C/36C

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER



TO-218

Maximum Ratings

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	100	Vdc
Collector - Base Voltage	V_{CBO}	100	Vdc
Emitter - Base Voltage	V_{EBO}	5.0	Vdc
Collector Current (Continuous) (Peak) (Note 1)	I_C	25 40	Adc
Base Current	I_B	5.0	Adc
Unclamped Inductive Load	E_{SB}	90	mJ

Thermal Characteristics

Characteristic	Symbol	Max	Units
Total Power Dissipation $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	125	Watts
Thermal Resistance (Junction to Case)	$R_{\theta JC}$	1.0	$^\circ\text{C/W}$
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	35.7	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{STG}	-65 to 150	$^\circ\text{C}$

Electrical Characteristics @ 25°C

Off Characteristic	Symbol	Min	Max	Unit
Collector - Emitter Sustaining Voltage (Note 1) ($I_C = 30 \text{ mAdc}, I_B = 0$)	$V_{CEO(sus)}$	100	---	Vdc
Collector - Emitter Cutoff Current ($V_{CE} = 60 \text{ Vdc}, I_B = 0$)	I_{CEO}	---	1.0	mAdc
Collector - Emitter Cutoff Current ($V_{CE} = 100 \text{ Vdc}, V_{EB} = 0$)	I_{CES}	---	0.7	mAdc
Emitter - Base Cutoff Current ($V_{EB} = 5.0 \text{ Vdc}, I_C = 0$)	I_{EBO}	---	1.0	mAdc

Notes:

(1) Pulse test: Pulse width = 10 ms, duty cycle $\leq 10\%$.



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Electrical Characteristics @ 25°C

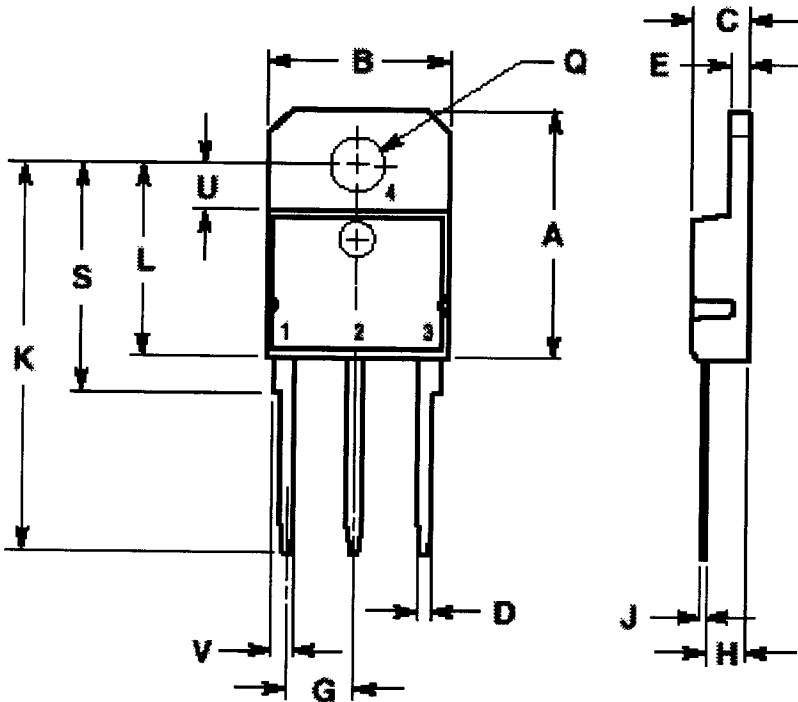
On Characteristic (Note 1)	Symbol	Min	Max	Unit
DC Current Gain ($I_C = 1.5 \text{ Adc}, V_{CE} = 4.0 \text{ Vdc}$) ($I_C = 15 \text{ Adc}, V_{CE} = 4.0 \text{ Vdc}$)	H_{FE}	25 15	--- 75	---
Collector - Emitter Saturation Voltage ($I_C = 15 \text{ Adc}, I_B = 1.5 \text{ Adc}$) ($I_C = 25 \text{ Adc}, I_B = 5.0 \text{ Adc}$)	$V_{CE(sat)}$	--- ---	1.8 4.0	Vdc
Base - Emitter On Voltage ($I_C = 15 \text{ Adc}, V_{CE} = 4.0 \text{ Vdc}$) ($I_C = 25 \text{ Adc}, V_{CE} = 4.0 \text{ Vdc}$)	$V_{BE(on)}$	--- ---	2.0 4.0	Vdc
Dynamic Characteristic				
Current - Gain - Bandwidth Product ($I_C = 0.1 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 2.0 \text{ MHz}$)	f_T	3.0	---	MHz
Small - Signal Current Gain ($I_C = 0.2 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$)	h_{fe}	25	---	---

Notes:

(1) Pulse test: Pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2.0\%$.

Mechanical Dimensions

T0-218



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	19.00	19.60	0.749	0.771
B	14.00	14.50	0.551	0.570
C	4.20	4.70	0.165	0.185
D	1.00	1.30	0.040	0.051
E	1.45	1.65	0.058	0.064
G	5.21	5.72	0.206	0.225
H	2.60	3.00	0.103	0.118
J	0.40	0.60	0.016	0.023
K	28.50	32.00	1.123	1.259
L	14.70	15.30	0.579	0.602
Q	4.00	4.25	0.158	0.167
S	17.50	18.10	0.689	0.712
U	3.40	3.80	0.134	0.149
V	1.50	2.00	0.060	0.078