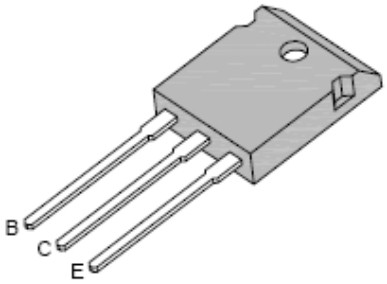
Power Transistor (PNP)

Features

- Designed for use in general purpose power amplifier and switching applications



TO-3P

Mechanical Data

Case:	TO-3P, Plastic Package
Terminals:	Plated leads solderable per MIL-STD-750, Method 2026
Weight:	0.22 ounce, 6.2 gram

Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	TIP36C	Unit
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current Continuous	25	A
I_{CM}	Collector Current Peak	40	A
I_B	Base Current	5.0	A
P_D	Power Dissipation @ T_C=25°C Derate above 25°C	125 1.0	W W/° C
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to +150	° C

Thermal Characteristics *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	Max.	Unit
$R_{\theta JC}$	Thermal Resistance from Junction to Case	1.0	° C /W

Electrical Characteristics *($T_{Ambient}$=25°C unless noted otherwise)*

Off Characteristics

Symbol	Description	Min.	Max.	Unit	Conditions
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage (Note)	100	-	V	I_C=30mA, I_B=0
I_{CEO}	Collector Cut-off Current	-	1.0	mA	V_{CE}=60V, I_B=0
I_{CES}	Collector Cut-off Current	-	0.7	mA	V_{CE}=100V, V_{EB}=0
I_{EBO}	Emitter Cut-off Current	-	1.0	mA	V_{EB}=5V, I_C=0

ON Characteristics *(Note)*

Symbol	Description	Min.	Max.	Unit	Conditions
h_{FE}	DC Current Gain	25	-		V_{CE}=4V, I_C=1.5A
		15	75		V_{CE}=4V, I_C=15A
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	-	1.8	V	I_C=15A, I_B=1.5A
		-	4.0	V	I_C=25A, I_B=5A
$V_{BE(on)}$	Base-Emitter On Voltage	-	2.0	V	I_C=15A, V_{CE}=4V
		-	4.0	V	I_C=25A, V_{CE}=4V

Dynamic Characteristics

Symbol	Description	Min.	Max.	Unit	Conditions
f_T	Current Gain-Bandwidth Product	3.0	-	MHz	V_{CE}=10V, I_C=1A, f_{TEST}=1MHz, f_T=$\lvert h_{fe} \rvert \cdot f_{TEST}$
h_{fe}	Small Signal Current Gain	25	-		V_{CE}=10V, I_C=1A, f=1KHz

Note: Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%.

Typical Characteristics Curves

Fig.1- Power Derating

1- Power Derating

Power Derating

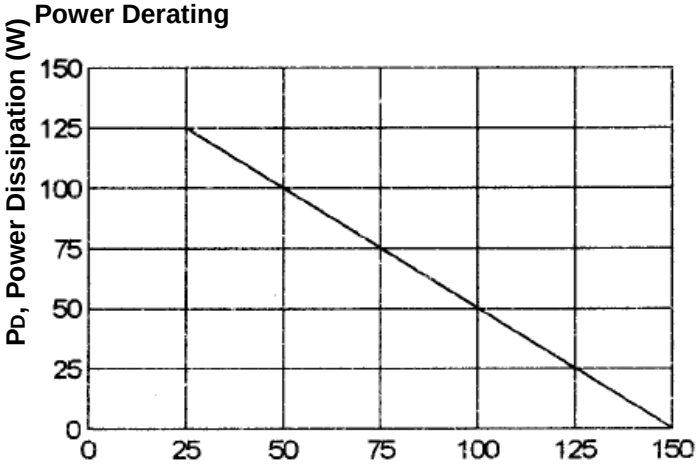


Fig.2- DC Current Gain

2- DC Current Gain

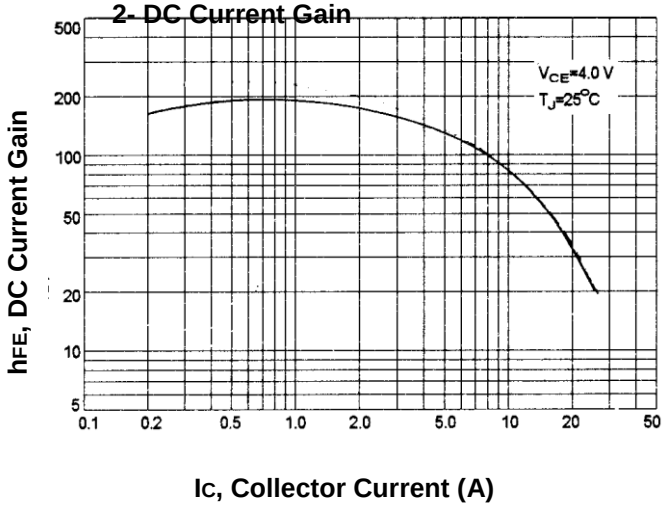


Fig.3 Turn-off Time-

3 Turn-off Time-

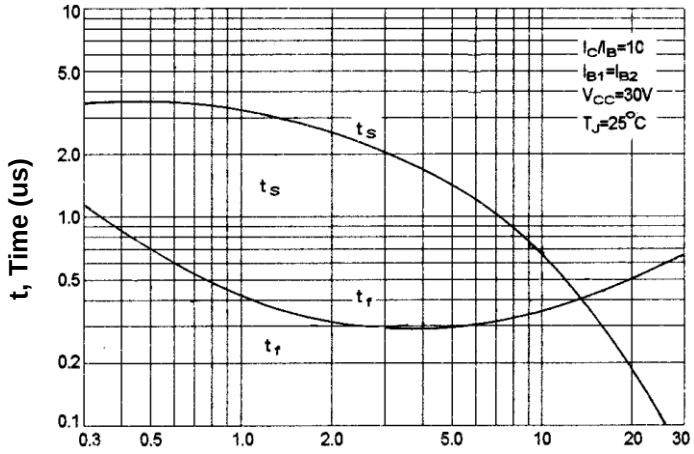
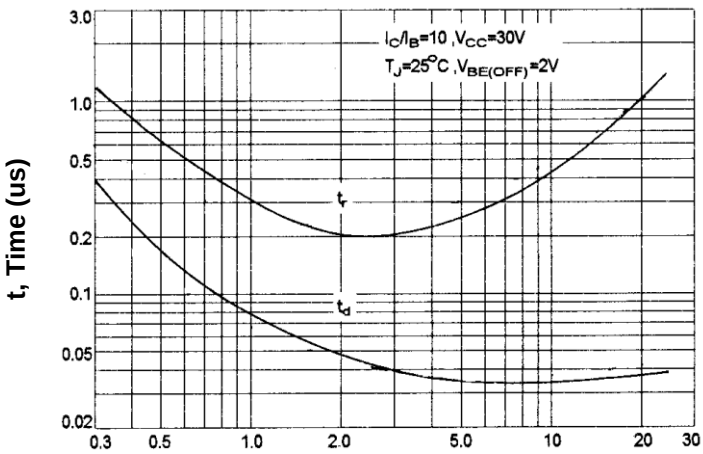


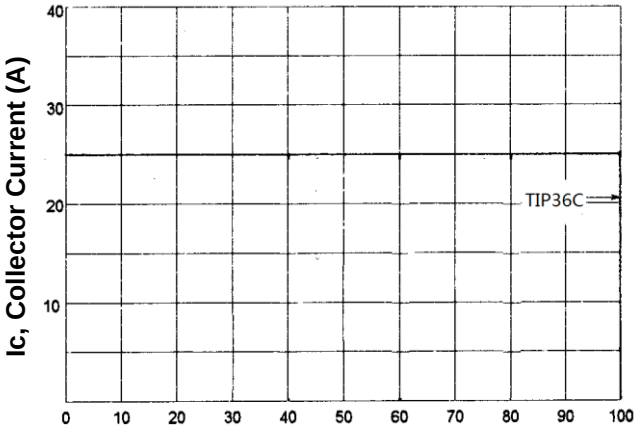
Fig.4 Turn-on Time-

4 Turn-on Time-



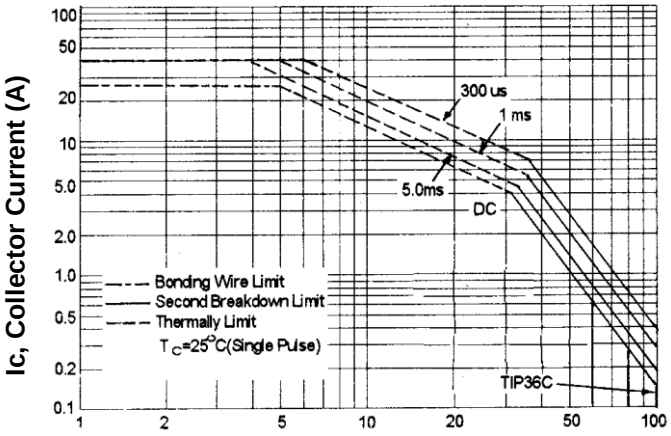
TIP36C

Fig.5 Reverse Base Safe Operating Area -
5 Reverse Base Safe Operating Area -



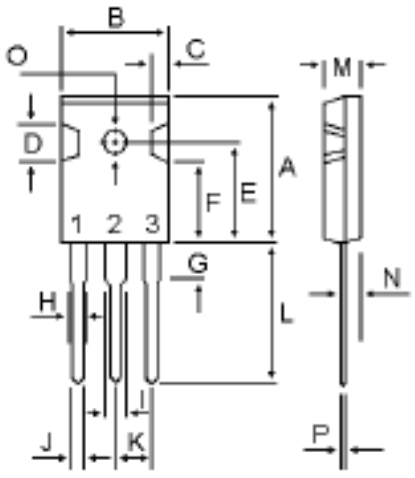
VCE, Collector-Emitter Voltage (V)

Fig.6 Active Region Safe Operating Area -
6 Active Region Safe Operating Area -



VCE, Collector-Emitter Voltage (V)

Dimensions in mm



PIN 1.BASE
2.COLLECTOR
3.EMITTER

DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

TO-3P

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