NPN TIP35-A-B-C

SILICON POWER TRANSISTORS

They are NPN power transistors mounted in jedec TO-3PN. They are intended for use in general purpose power amplifier and switching applications.
PNP complements are TIP36-A-B-C
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage	TIP35	40	V
		TIP35A	60	
		TIP35B	80	
		TIP35C	100	
V_{CEO}	Collector-Emitter Voltage	TIP35	40	V
		TIP35A	60	
		TIP35B	80	
		TIP35C	100	
V_{EBO}	Emitter-Base Voltage	TIP35	5	V
		TIP35A		
		TIP35B		
		TIP35C		
I_C	Collector Current	TIP35	25	A
		TIP35A		
		TIP35B		
		TIP35C		
I_{CM}	Collector Peak Current	TIP35	40	A
		TIP35A		
		TIP35B		
		TIP35C		

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ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
I_B	Base Current		TIP35 TIP35A TIP35B TIP35C	5	A
P_C	Power Dissipation	@ T_c < 25°	TIP35 TIP35A TIP35B TIP35C	125	Watts
		@ T_a < 25°	TIP35 TIP35A TIP35B TIP35C	3.5	
T_J	Junction Temperature		TIP35 TIP35A TIP35B TIP35C	150	°C
T_s	Storage Temperature range		TIP35 TIP35A TIP35B TIP35C	-65 to +150	

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R_{thJ-MB}	From junction to mounting base	TIP35 TIP35A TIP35B TIP35C	1	°C/W
R_{thJ-A}	From junction to ambient in free air	TIP35 TIP35A TIP35B TIP35C	35.7	°C/W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

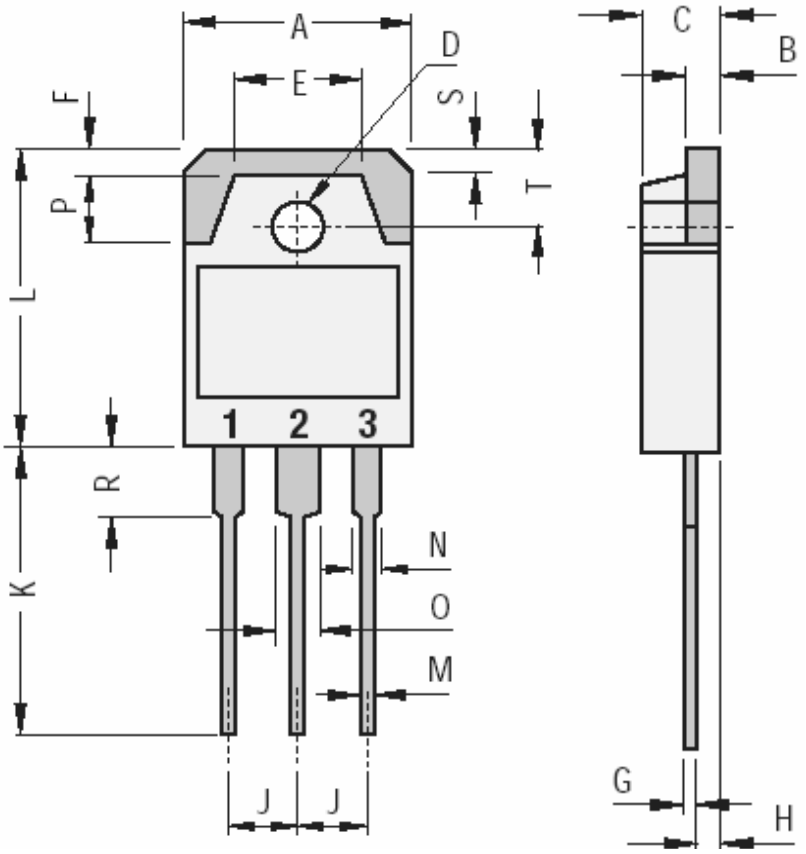
Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
I_{CES}	Collector Cutoff Current	I_E= 0, V_{CE} = V_{CEO}	TIP35	-	-	0.7	Ma
			TIP35A				
			TIP35B				
			TIP35C				
I_{CEO}	Collector Cutoff Current	I_B= 0, V_{CE} = 30V	TIP35	-	-	1	mA
			TIP35A				
		I_B= 0, V_{CE} = 60V	TIP35B	-	-	1	
			TIP35C				
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5 V, I_C= 0	TIP35	-	-	1	mA
			TIP35A				
			TIP35B				
			TIP35C				
V_{CEO}	Collector-Emitter Breakdown Voltage (*)	I_C= 30 mA, I_B= 0	TIP35	40	-	-	V
			TIP35A	60	-	-	
			TIP35B	80	-	-	
			TIP35C	100	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C= 15 A, I_B= 1.5 A	TIP35	-	-	1.8	V
			TIP35A				
			TIP35B				
			TIP35C				
		I_C= 25 A, I_B= 5 A	TIP35	-	-	4	V
			TIP35A				
			TIP35B				
			TIP35C				
$V_{BE(on)}$	Base-Emitter Voltage (*)	I_C= 15 A, V_{CE}= 4 V	TIP35	-	-	2	V
			TIP35A				
			TIP35B				
			TIP35C				
		I_C= 25 A, V_{CE}= 4 V	TIP35	-	-	4	V
			TIP35A				
			TIP35B				
			TIP35C				
h_{FE}	DC Current Gain (*)	V_{CE}=4 V, I_C= 1.5 A	TIP35	25	-	-	-
			TIP35A				
			TIP35B				
			TIP35C				
		V_{CE}= 4 V, I_C= 15 A	TIP35	15	-	75	
			TIP35A				
			TIP35B				
			TIP35C				

(*) Pulse Width ≈ 300 μs, Duty Cycle ∠ 2.0%

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Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
f_T	Current Gain-Bandwidth Product	V_{CE}= 10 V, I_C= 10 A f= 1kHz	TIP35	3	-	-	MHz
			TIP35A				
			TIP35B				
			TIP35C				

MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



DIMENSIONS (mm)		
	Min.	Max.
A	15.20	1600
B	1.90	2.10
C	4.60	5.00
D	3.10	3.30
E		9.60
F		2.00
G	0.35	0.55
H		1.40
J	5.35	5.55
K	20.00	
L	19.60	20.20
M	0.95	1.25
N		2.00
O		3.00
P		4.00
R		4.00
S		1.80
T	4.80	5.20

Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter
Case :	Collector

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