



NPN TIP35-A-B-C

SILICON POWER TRANSISTORS

They are PNP 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	5	A
		TIP35A		
		TIP35B		
		TIP35C		
P_c	Power Dissipation	@ $T_c < 25^\circ$	125	Watts
		TIP35		
		TIP35A		
		TIP35B		
		TIP35C		
		@ $T_a < 25^\circ$	3.5	
		TIP35		
		TIP35A		
TIP35B				
TIP35C				
T_J	Junction Temperature	TIP35	150	$^\circ\text{C}$
		TIP35A		
		TIP35B		
		TIP35C		
T_s	Storage Temperature range	TIP35	-65 to +150	$^\circ\text{C}$
		TIP35A		
		TIP35B		
		TIP35C		

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

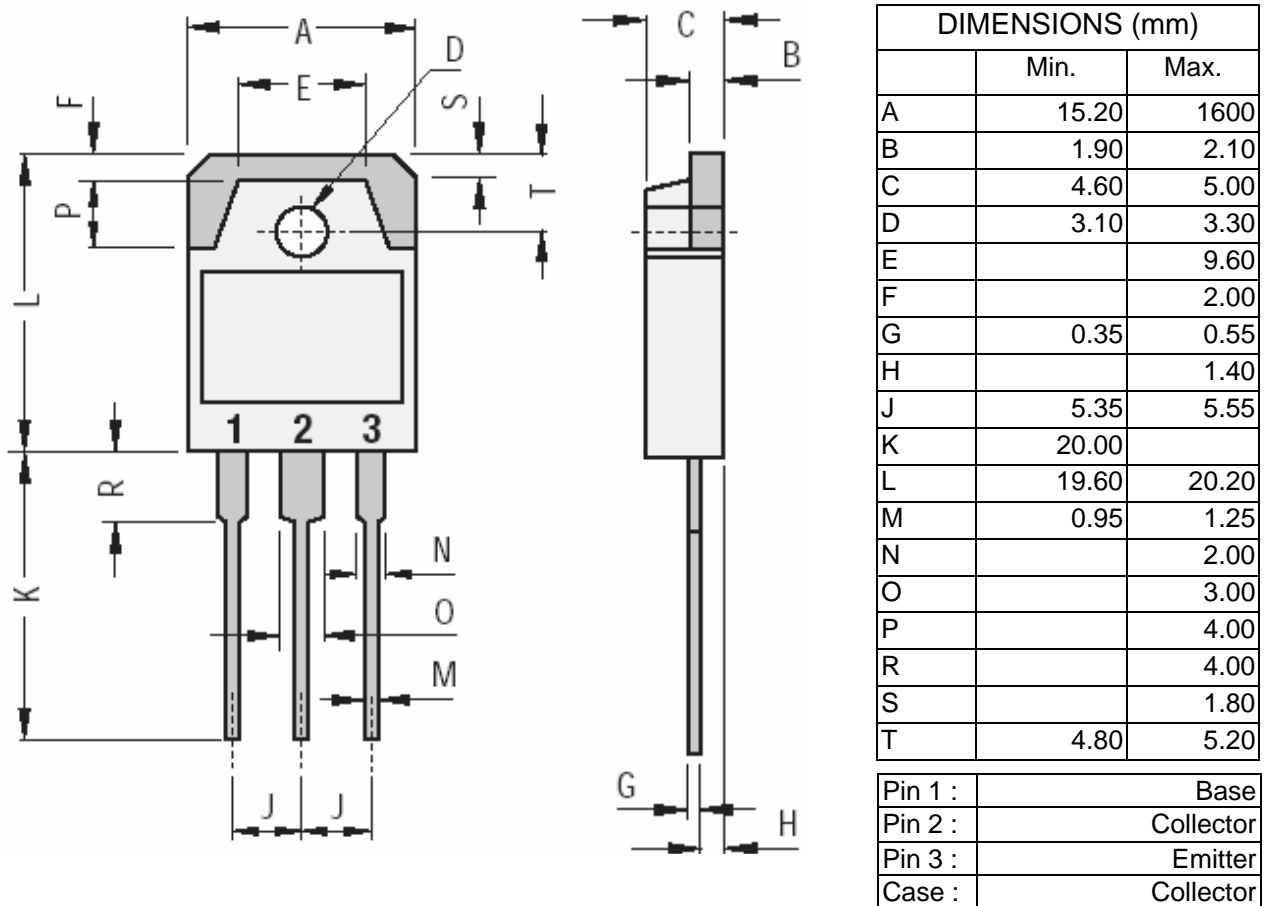
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit		
I_{CES}	Collector Cutoff Current	$I_E = 0, V_{CE} = V_{CEO}$	TIP35	-	-	0.7	Ma	
			TIP35A					
			TIP35B					
			TIP35C					
I_{CEO}	Collector Cutoff Current	$I_B = 0, V_{CE} = 30V$	TIP35	-	-	1	mA	
			TIP35A					
		$I_B = 0, V_{CE} = 60V$	TIP35B	-	-	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 $\approx 300 \mu s$, Duty Cycle $\angle 2.0\%$

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

MECHANICAL DATA CASE TO3PN Non Isolated Plastic Package



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