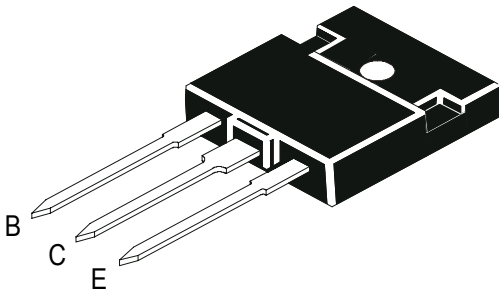
Transys Electronics LIMITED

NPN POWER TRANSISTORS

TIP33F, 33AF, 33BF, 33CF
TIP 34F,34AF, 34BF, 34CF



TO -3P
Plastic Package

Complementary TIP34F, 34AF, 34BF, 34CF

General Purpose Power Amplifier and Switching Applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	33F / 34F	33AF / 34AF	33BF / 34BF	33CF / 34CF	UNITS
Collector -Base Voltage(open emitter)	V_{CBO}	>40	>60	>80	>100	V
Collector -Emitter Voltage(open base)	V_{CEO}	>40	>60	>80	>100	V
Emitter Base Voltage(open collector)	V_{EBO}	<5.0				V
Collector Current	I_C	<10				A
Collector Current (Peak Valule) (1)	I_C	<15				A
Base Current	I_B	<3.0				A
Total Power Dissipation upto Tc=25º C	P_{tot}	<80				W
Derate above 25ºC		<0.64				W/ºC
Junction Temperature	T_j	<150				ºC
Storage Temperature	T_{stg}	-55 to +150				ºC
THERMAL RESISTANCE						
Junction to Case	$R_{th\ (j-c)}$	1.56				ºC/W
Junction to Ambient	$R_{th\ (j-a)}$	35.7				ºC/W

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL		33F / 34F	33AF / 34AF	33BF / 34BF	33CF / 34CF	UNITS
Collector Cut off Current	I_{CEO}	V_{CE}=30V, I_B=0	<0.7	<0.7			mA
	I_{CEO}	V_{CE}=60V, I_B=0			<0.7	<0.7	mA
	I_{CES}	V_{EB}=0, V_{CE} =Rated V_{CEO}		< 0.4			mA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0		<1.0			mA
Breakdown Voltages							
	$V_{CEO\ (sus)}$*	I_C=30mA, I_B=0	>40	<60	<80	<100	V
	V_{CBO}	I_C=1mA, I_E=0	>40	<60	<80	<100	V
	V_{EBO}	I_E =1mA, I_C = 0		>5.0			V
Saturation Voltages							
	$V_{CE(sat)}$ *	I_C=3A, I_B=0.3A		<1.0			V
		I_C=10A, I_B=2.5A		<4.0			V

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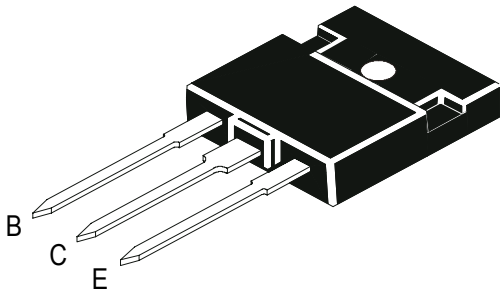


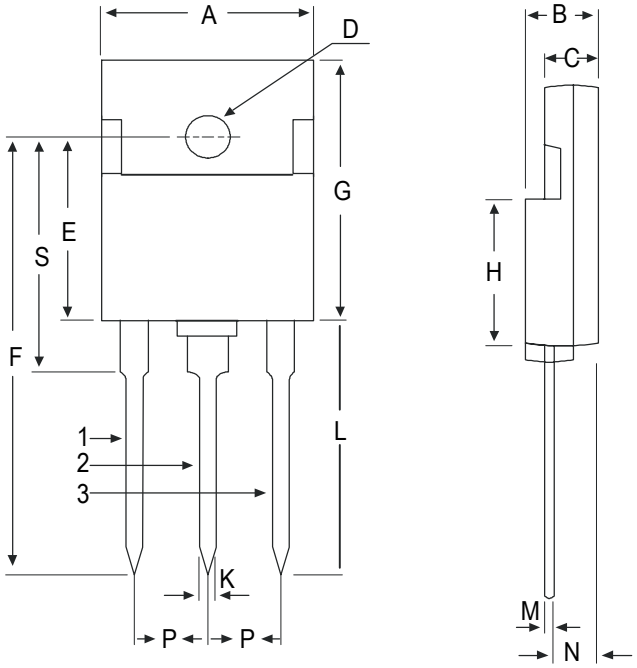
DESCRIPTION	SYMBOL		33F 34F	33AF 34AF	33BF 34BF	33CF 34CF	UNITS
Base Emitter on Voltage	$V_{BE\ (on)}$ *	I_C=3A, V_{CE}=4V		<1.6			V
	$V_{BE\ (on)}$ *	I_C=10A, V_{CE}=4V		<3.0			V
DC Current Gain	h_{FE} *	I_C =1A, V_{CE} =4V		>40			
		I_C =3A, V_{CE} =4V		>20			
Small Signal Current Gain	I hfe I	I_C =0.5A, V_{CE}=10V, f=1KHz		>20			
Transition frequency at f= 1MHz	$f_{T\ (2)}$	I_C=0.5A,V_{CE}=10V		>3.0			MHz

*** Pulse test : Pulse width = 30μs, duty cycle ≤ 2%**
(1) Pulse test : Pulse with = 10ms, duty cycle < 10%
(2) fT = Ihfel .f_{test}

TIP33F, 33AF, 33BF, 33CF
TIP 34F,34AF, 34BF, 34CF

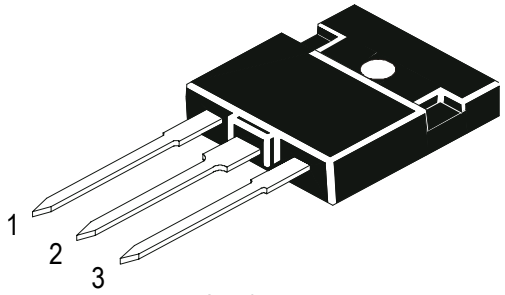
TO -3P
Plastic Package

TO-3P (TO-218) Plastic Package



DIM	MIN	MAX
A	15.80	16.40
B	5.20	5.70
C	3.80	4.20
D	Ø 3.30	Ø 3.60
E	14.50	15.10
F	33.25	36.75
G	20.75	21.25
H	11.50	12.25
K	1.00	1.30
L	18.75	21.65
M	0.40	0.60
N	3.15	3.45
P	5.21	5.72
S	18.75	19.25

All diminsions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3P	100 pcs/polybag	628 gm/100 pcs	3" x 7.5" x 7.5"	0.3K	17" x 15" x 13.5"	4.8K	42 kgs