Silicon NPN Power Transistors

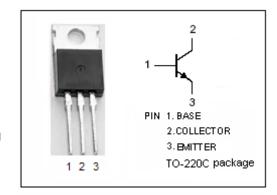
TIP31/31A/31B/31C

DESCRIPTION

- DC Current Gain -h_{FE} = 25(Min)@ I_C= 1.0A
- · Collector-Emitter Sustaining Voltage-
 - : $V_{CEO(SUS)} = 40V(Min)$ TIP31; 60V(Min)- TIP31A 80V(Min)- TIP31B; 100V(Min)- TIP31C
- Complement to Type TIP32/32A/32B/32C

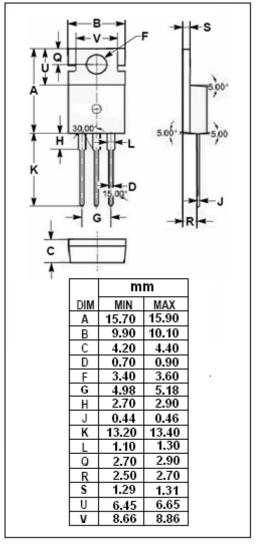
APPLICATIONS

• Designed for use in general purpose amplifier and switching applications.



ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT		
V _{СВО}	Collector-Base Voltage	TIP31	40	V	
		TIP31A	60		
		TIP31B	80		
		TIP31C	100		
V _{CEO}	Collector-Emitter Voltage	TIP31	40	V	
		TIP31A	60		
		TIP31B	80		
		TIP31C	100		
V _{EBO}	Emitter-Base Voltage	5	V		
Ic	Collector Current-Continuo	3	Α		
I _{CM}	Collector Current-Pulse	5	Α		
I _B	Base Current	1	Α		
Pc	Collector Power Dissipation $T_C=25^{\circ}C$		40	· W	
	Collector Power Dissipation T _a =25°C		2		
Tj	Junction Temperature	150	$^{\circ}\!\mathbb{C}$		
T _{stg}	Storage Ttemperature Ran	-65~150	$^{\circ}$		



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ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	TIP31	I _C = 30mA; I _B = 0	40		V
		TIP31A		60		
		TIP31B		80		
		TIP31C		100		
V _{CE(sat)}	Collector-Emitter Saturation Voltage		I _C = 3A; I _B = 0.375A		1.2	V
V _{BE(on)}	Base-Emitter On Voltage		I _C = 3A ; V _{CE} = 4V		1.8	V
I _{CES}	Collector Cutoff Current	TIP31	V _{CE} = 40V; V _{EB} = 0		0.2	mA
		TIP31A	V _{CE} = 60V; V _{EB} = 0			
		TIP31B	V _{CE} = 80V; V _{EB} = 0			
		TIP31C	V _{CE} = 100V; V _{EB} = 0			
I _{CEO}	Collector Cutoff Current	TIP31/31A	V _{CE} = 30V; I _B = 0		0.3	mA
		TIP31B/31C	V _{CE} = 60V; I _B = 0			
I _{EBO}	Emitter Cutoff Current		V _{EB} = 5V; I _C = 0		1.0	mA
h _{FE-1}	DC Current Gain		I _C = 1A; V _{CE} = 4V	25		
h _{FE-2}	DC Current Gain		I _C = 3A ; V _{CE} = 4V	10	50	
f _T	Current-Gain—Bandwidth Product		I _C = 0.5A ; V _{CE} = 10V	3		MHz

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