

TIP41 SERIES (TIP41/41A/41B/41C)

NPN EPITAXIAL SILICON TRANSISTOR

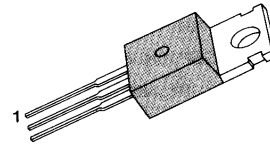
MEDIUM POWER LINEAR SWITCHING APPLICATIONS

• Complement to TIP42/42A/42B/42C

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage : TIP41	V_{CBO}	40	V
: TIP41A		60	V
: TIP41B		80	V
: TIP41C		100	V
Collector Emitter Voltage : TIP41	V_{CEO}	40	V
: TIP41A		60	V
: TIP41B		80	V
: TIP41C		100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	6	A
Collector Current (Pulse)	I_C	10	A
Base Current	I_B	2	A
Collector Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	65	W
Collector Dissipation ($T_A=25^{\circ}\text{C}$)	P_C	2	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^{\circ}\text{C}$

TO-220



1.Base 2.Collector 3.Emitter

ELECTRICAL CHARACTERISTICS ($T_C = 25^{\circ}\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
*Collector Emitter Sustaining Voltage : TIP41	$BV_{CEO(SUS)}$	$I_C = 30\text{mA}, I_B = 0$	40		V
: TIP41A			60		V
: TIP41B			80		V
: TIP41C			100		V
Collector Cutoff Current : TIP41/41A	I_{CEO}	$V_{CE} = 30\text{V}, I_B = 0$		0.7	mA
: TIP41B/41C		$V_{CE} = 60\text{V}, I_B = 0$		0.7	mA
Collector Cutoff Current : TIP41	I_{CES}	$V_{CE} = 40\text{V}, V_{EB} = 0$		400	uA
: TIP41A		$V_{CE} = 60\text{V}, V_{EB} = 0$		400	uA
: TIP41B		$V_{CE} = 80\text{V}, V_{EB} = 0$		400	uA
: TIP41C		$V_{CE} = 100\text{V}, V_{EB} = 0$		400	uA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$		1	mA
*DC Current Gain	h_{FE}	$V_{CE} = 4\text{V}, I_C = 0.3\text{A}$	30		
		$V_{CE} = 4\text{V}, I_C = 3\text{A}$	15	75	
*Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6\text{A}, I_B = 600\text{mA}$		1.5	V
*Base-Emitter Saturation Voltage	$V_{BE(on)}$	$V_{CE} = 4\text{V}, I_C = 6\text{A}$		2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$ $f = 1\text{MHz}$	3.0		MHz

* Pulse Test : $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

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