



# TIP35C

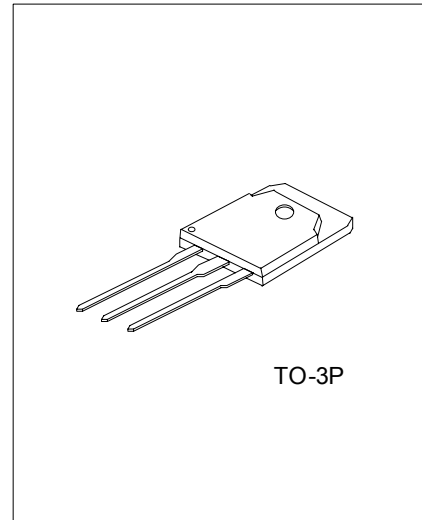
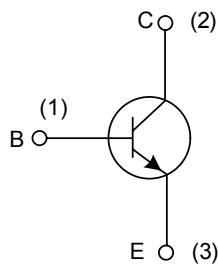
## NPN SILICON TRANSISTOR

### HIGH POWER TRANSISTORS

#### DESCRIPTION

The UTC TIP35C is a NPN Expitaxial-Base transistor, designed for using in general purpose amplifier and switching applications. Complement to TIP36C.

#### INTERNAL SCHEMATIC DIAGRAM



\*Pb-free plating product number: TIP35CL

#### ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
TIP35C-T3P-K	TIP35C-T3P-K	TO-3P	B	C	E	Bulk

<p>TIP35CL-T3P-K</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p>	<p>(1) K: Bulk</p> <p>(2) T3P: TO-3P</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p>
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### ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage ( $I_E = 0$ )	$V_{CBO}$	100	V
Collector-Emitter Voltage ( $I_B = 0$ )	$V_{CEO}$	100	V
Emitter-Base Voltage ( $I_C = 0$ )	$V_{EBO}$	5	V
Collector Current	$I_C$	25	A
Collector Peak Current	$I_{CM}$	50	A
Base Current	$I_B$	5	A
Total Dissipation ( $T_c = 25$ )	$P_D$	125	W
Junction Temperature	$T_J$	+150	
Storage Temperature	$T_{STG}$	-65 ~ +150	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL DATA

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Thermal Resistance Junction-Case	$\theta_{JC}$			1	/W

### ■ ELECTRICAL CHARACTERISTICS ( $T_c = 25$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current ( $I_B = 0$ )	$I_{CEO}$	$V_{CE} = 60$ V			1	mA
Emitter Cut-off Current ( $I_C = 0$ )	$I_{EBO}$	$V_{EB} = 5$ V			1	mA
Collector Cut-off Current ( $V_{BE} = 0$ )	$I_{CES}$	$V_{CE} = \text{Rated } V_{CEO}$			0.7	mA
Collector-Emitter Sustaining Voltage ( $I_B = 0$ )	$V_{CEO(SUS)}^*$	$I_C = 30$ mA	100			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}^*$	$I_B = 1.5$ A, $I_C = 15$ A			1.8	V
		$I_B = 5$ A, $I_C = 25$ A			4	V
Base-Emitter Voltage	$V_{BE(ON)}^*$	$V_{CE} = 4$ V, $I_C = 15$ A			2	V
		$V_{CE} = 4$ V, $I_C = 25$ A			4	V
DC Current Gain	$h_{FE}^*$	$V_{CE} = 4$ V, $I_C = 1.5$ A	25		50	
		$V_{CE} = 4$ V, $I_C = 15$ A	10			
Transition Frequency	$f_T$	$V_{CE} = 10$ V, $I_C = 1$ A, $f = 1$ MHz	3			MHz
Small Signal Current Gain	$h_{fe}$	$V_{CE} = 10$ V, $I_C = 1$ A, $f = 1$ KHz	25			

\* Pulsed: Pulse Duration = 300  $\mu$ s, Duty Cycle  $\leq 2$  %

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