

**DESCRIPTION**

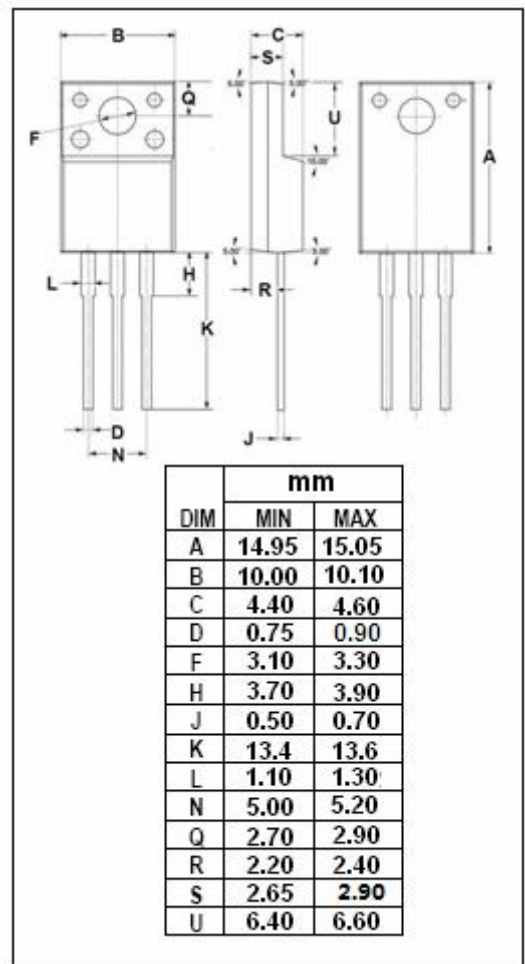
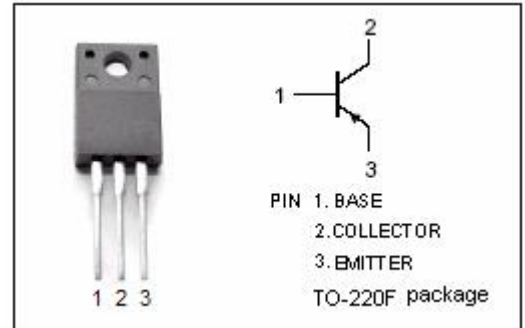
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -50V(\text{Min})$
- DC Current Gain-  
:  $h_{FE} = 50(\text{Min})@ (V_{CE} = -1V, I_C = -6A)$
- Low Saturation Voltage-  
:  $V_{CE(sat)} = -0.35V(\text{Max})@ (I_C = -6A, I_B = -0.6A)$

**APPLICATIONS**

- Designed for DC motor driver, chopper regulator and general purpose applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-12	A
$I_B$	Base Current-Continuous	-3	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	35	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



**ELECTRICAL CHARACTERISTICS**

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -25mA ; I <sub>B</sub> = 0	-50			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -0.3A			-0.35	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -50V ; I <sub>E</sub> = 0			-100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -6V; I <sub>C</sub> = 0			-100	μ A
h <sub>FE1</sub>	DC Current Gain	I <sub>C</sub> = -6A ; V <sub>CE</sub> = -1V	50			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> = -10V; f <sub>test</sub> = 1.0MHz		330		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = 0.5A ; V <sub>CE</sub> = -12V		40		MHz

Switching Times

t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = -6A , R <sub>L</sub> = 4 Ω , I <sub>B1</sub> = -I <sub>B2</sub> = -0.12A, V <sub>CC</sub> = -24V		0.4		μ s
t <sub>stg</sub>	Storage Time			0.4		μ s
t <sub>f</sub>	Fall Time			0.2		μ s