

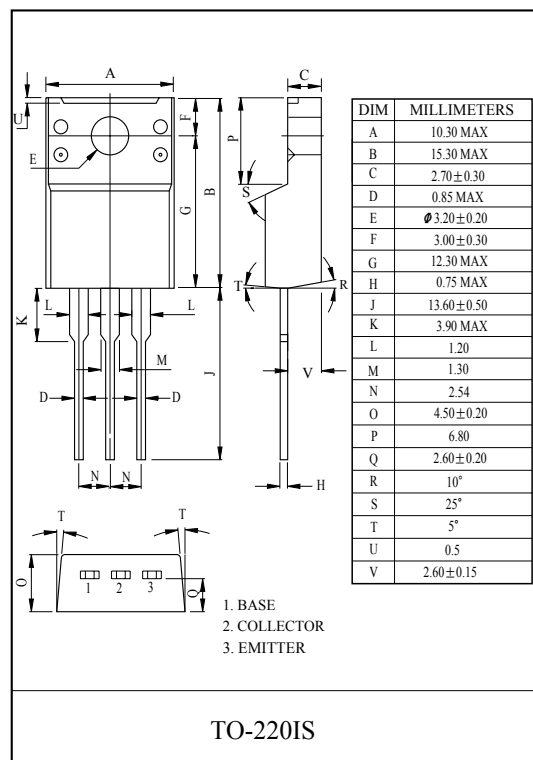
HIGH POWER SWITCHING APPLICATIONS.
HAMMER DRIVER, PULSE MOTOR DRIVER
APPLICATIONS.

FEATURES

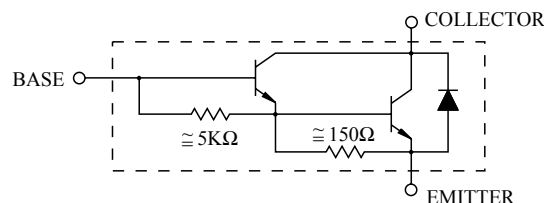
- High DC Current Gain : $h_{FE}=2000(\text{Min.})$ at $V_{CE}=3V$, $I_C=3A$.
- Low Saturation Voltage : $V_{CE(sat)}=1.5V(\text{Max.})$ at $I_C=3A$.

MAXIMUM RATING ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	7	A
Base Current	I_B	0.2	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	30	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$



EQUIVALENT CIRCUIT



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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=100V$, $I_E=0$	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V$, $I_C=0$	-	-	3.0	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50\text{mA}$, $I_B=0$	100	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=3V$, $I_C=3A$	2000	-	15000	
		$h_{FE(2)}$	$V_{CE}=3V$, $I_C=7A$	1000	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)(1)}$	$I_C=3A$, $I_B=6\text{mA}$	-	0.9	1.5	V
		$V_{CE(sat)(2)}$	$I_C=7A$, $I_B=14\text{mA}$	-	1.2	2.0	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=3A$, $I_B=6\text{mA}$	-	1.5	2.5	V
Switching Time	Turn-on Time	t_{on}	$I_{B1}=I_{B2}=6\text{mA}$ DUTY CYCLE $\leq 1\%$	-	0.8	-	μS
	Storage Time	t_{stg}		-	3.0	-	
	Fall Time	t_f		-	2.5	-	

