

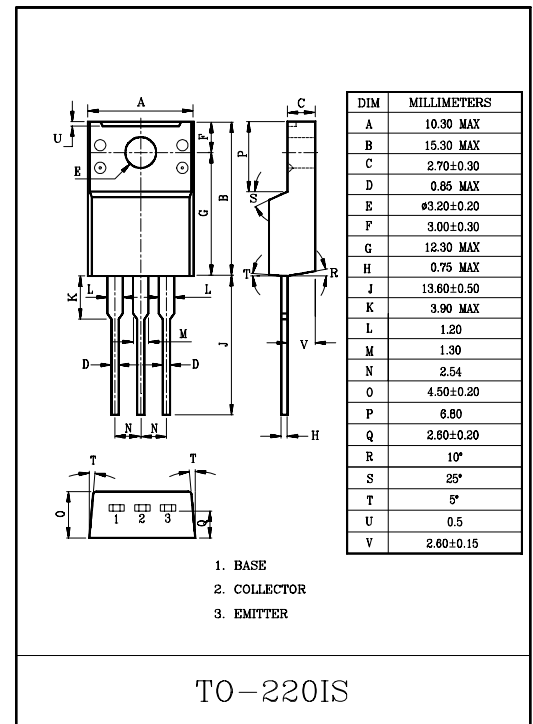
HIGH POWER SWITCHING APPLICATIONS.
HAMMER DRIVER, PULSE MOTOR DRIVER
APPLICATIONS.

FEATURES

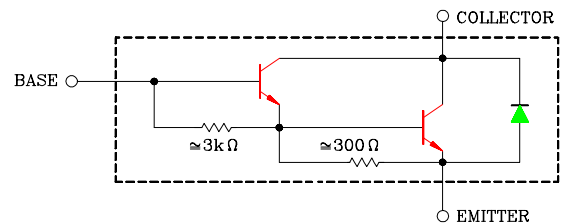
- High DC Current Gain : $h_{FE}=2000(\text{Min.})$ at $V_{CE}=2V, I_C=3A$.
- Low Saturation Voltage : $V_{CE(\text{sat})}=1.5V(\text{Max.})$ at $I_C=3A$.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	150	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EB0}	7	V
Collector Current	I_C	5	A
Base Current	I_B	0.5	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	25	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



EQUIVALENT CIRCUIT

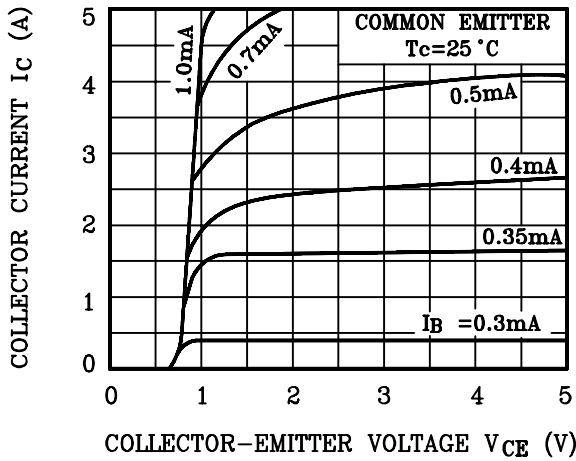


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

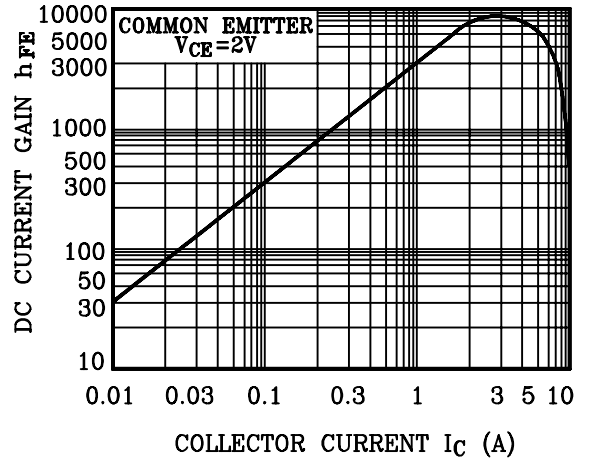
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=100V, I_B=0$	-	-	1	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	100	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=2V, I_C=3A$	2000	6000	15000	
		$h_{FE(2)}$	$V_{CE}=2V, I_C=5A$	500	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(\text{sat})}$	$I_C=3A, I_B=3mA$	-	0.9	1.5	V
	Base-Emitter	$V_{BE(\text{sat})}$	$I_C=3A, I_B=3mA$	-	1.6	2.0	
Switching Time	Turn-on Time	t_{on}	<p>$I_{B1} = -I_{B2} = 3mA$ DUTY CYCLE $\leq 1\%$</p>	-	1.0	-	μS
	Storage Time	t_{stg}		-	3.5	-	
	Fall Time	t_f		-	1.2	-	

KTD1413

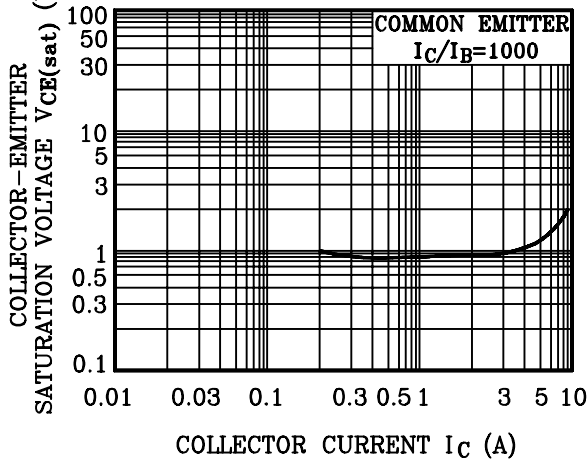
$I_C - V_{CE}$



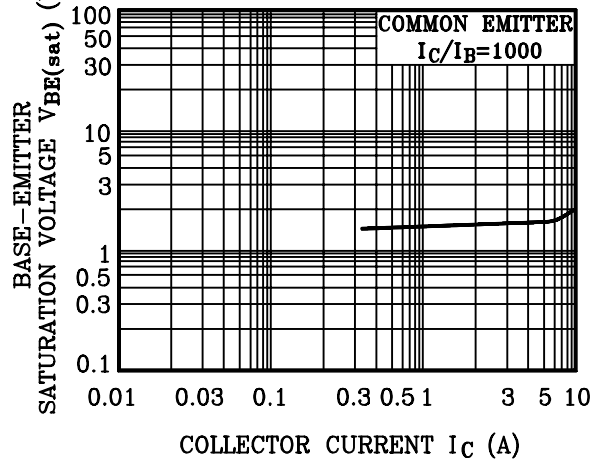
$h_{FE} - I_C$



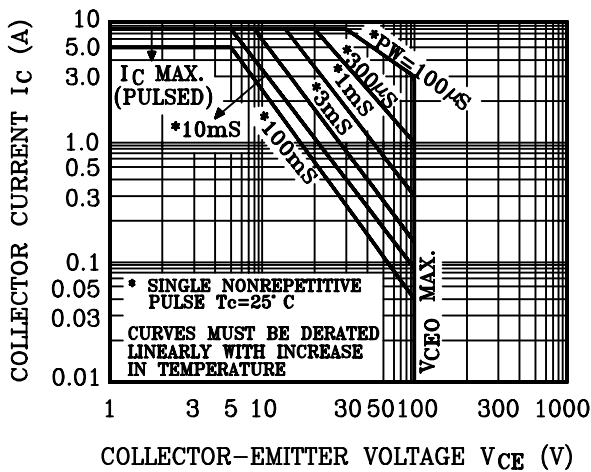
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



SAFE OPERATING AREA



$P_C - T_a$

