

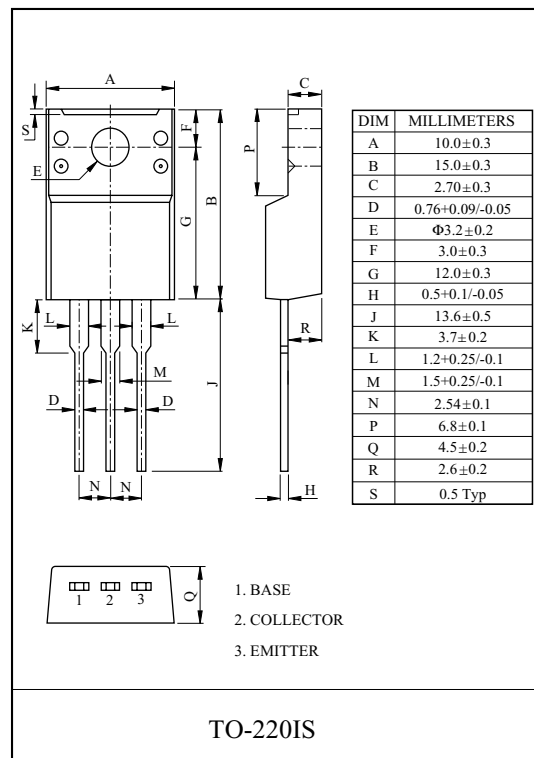
INDUSTRIAL USE.
HIGH POWER SWITCHING APPLICATIONS.
HAMMER DRIVER, PULSE MOTOR DRIVER
APPLICATIONS.

FEATURES

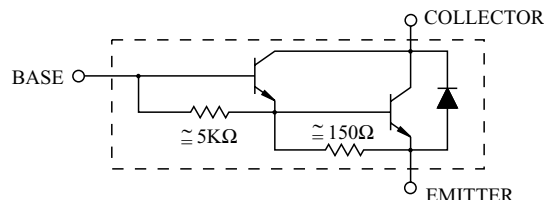
- High DC Current Gain : $h_{FE}=2000(\text{Min.})$ at $V_{CE}=3V$, $I_C=3A$.
- Low Saturation Voltage : $V_{CE(sat)}=1.5V(\text{Max.})$ at $I_C=3A$.

MAXIMUM RATING (Ta=25℃)

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 (Tc=25℃)	P_C	30	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~ 150	℃



EQUIVALENT CIRCUIT

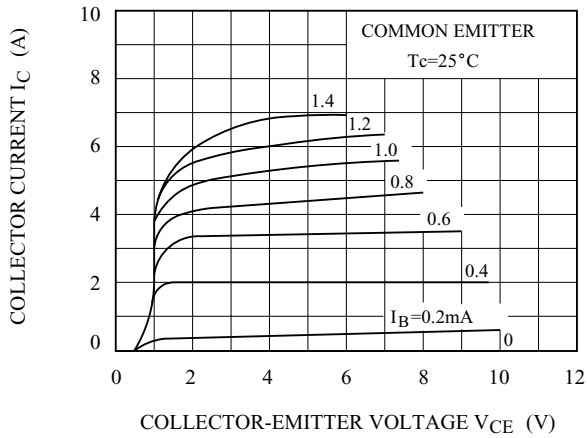


ELECTRICAL CHARACTERISTICS (Ta=25℃)

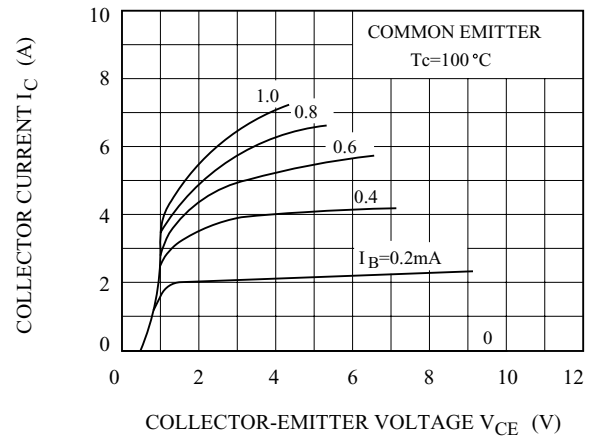
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=100V$, $I_E=0$	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V$, $I_C=0$	-	-	3.0	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA$, $I_B=0$	100	-	-	V
DC Current Gain	$h_{FE}(1)$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

KTD1415V

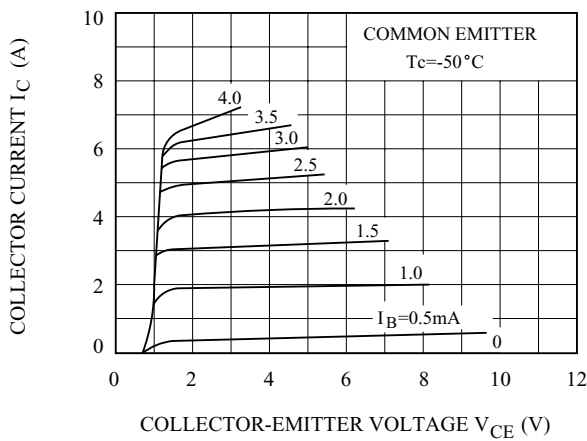
$I_C - V_{CE}$



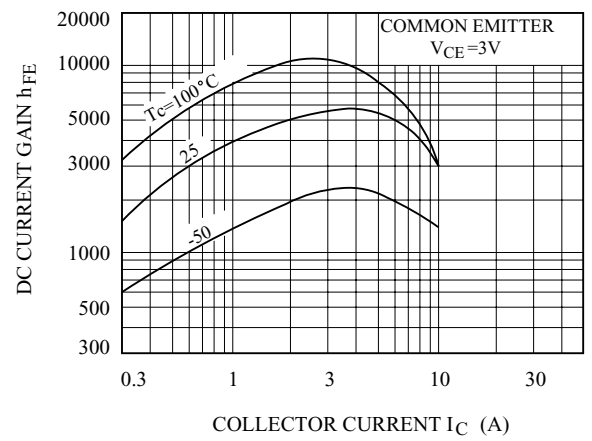
$I_C - V_{CE}$



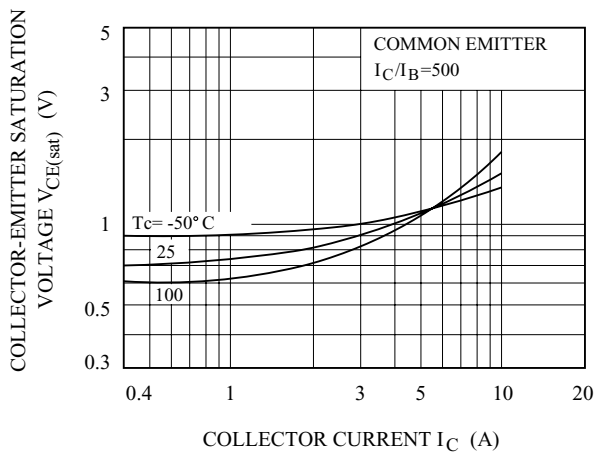
$I_C - V_{CE}$



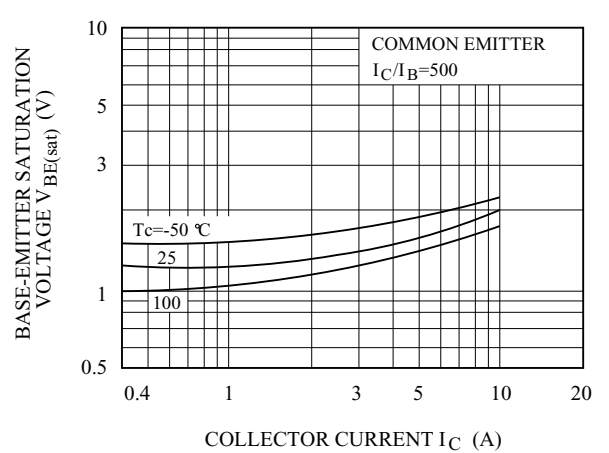
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



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