

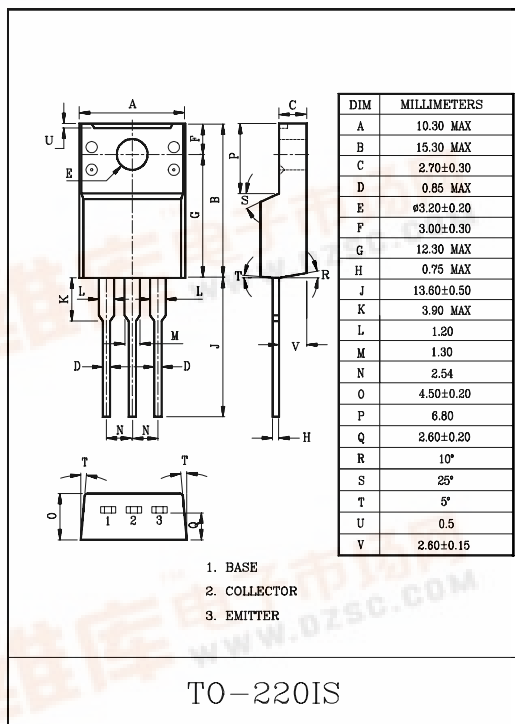
HIGH POWER SWITCHING APPLICATIONS.
HAMMER DRIVER, PULSE MOTOR DRIVER APPLICATIONS.

FEATURES

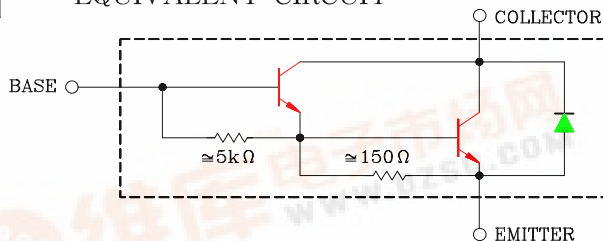
- High DC Current Gain : $h_{FE}=2000(\text{Min.})$ at $V_{CE}=3\text{V}$, $I_C=3\text{A}$.
- Low Saturation Voltage : $V_{CE(\text{sat})}=1.5\text{V}(\text{Max.})$ at $I_C=3\text{A}$.

MAXIMUM RATINGS (Ta=25°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 (Tc=25°C)	P_C	30	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C



EQUIVALENT CIRCUIT



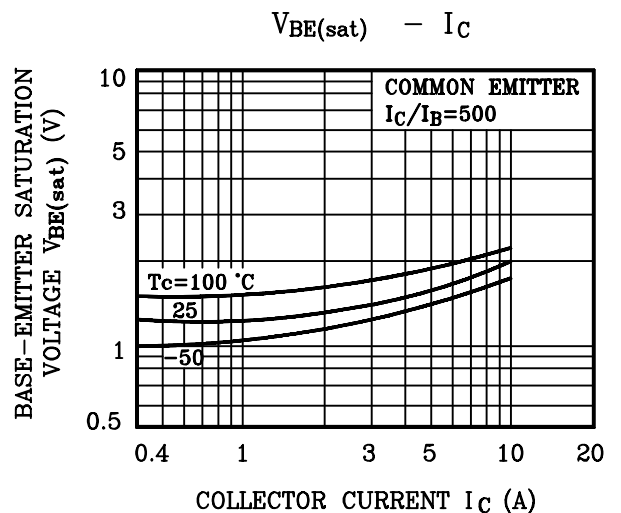
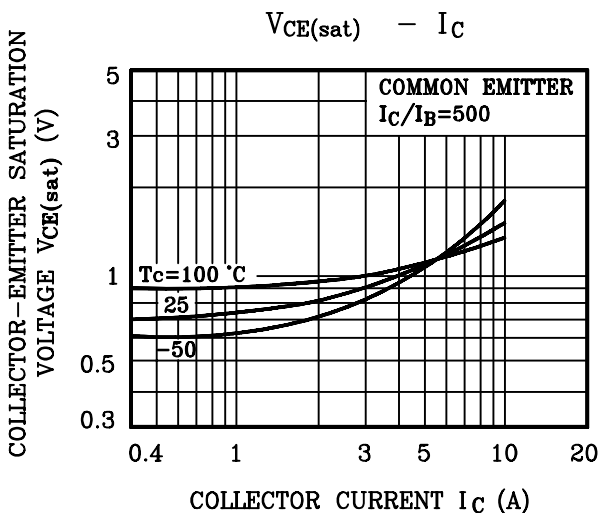
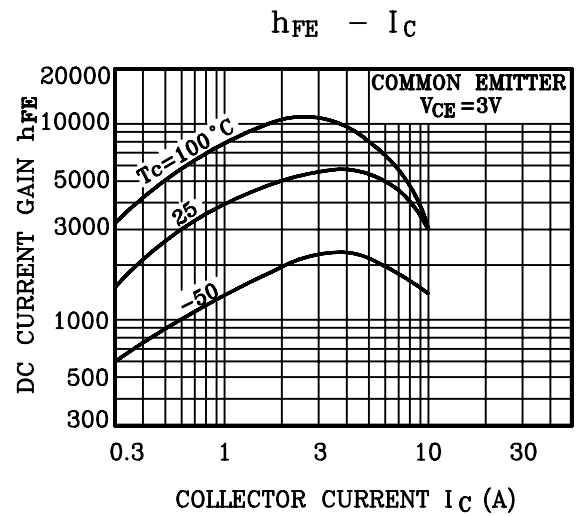
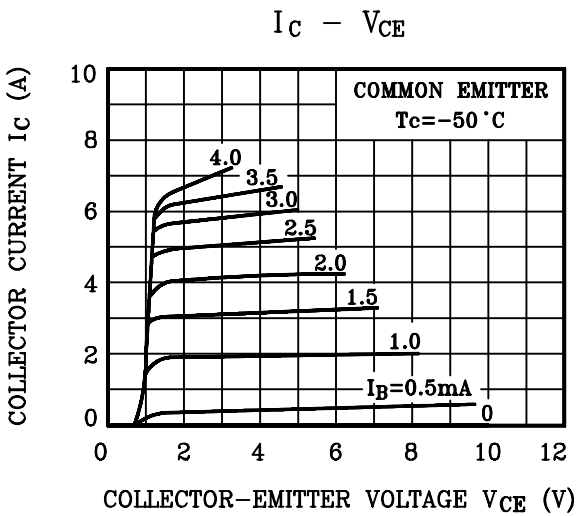
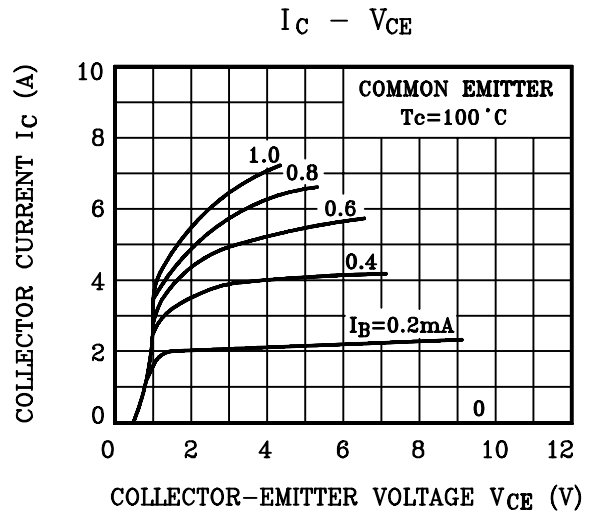
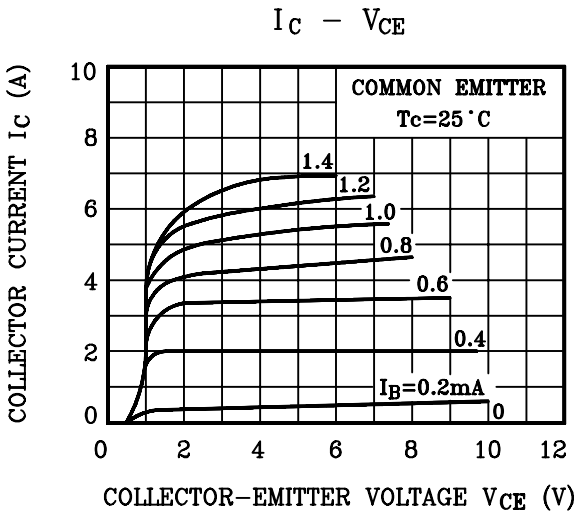
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

$I_{B1} = -I_{B2} = 6\text{mA}$
DUTY CYCLE $\leq 1\%$



KTD1415



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