

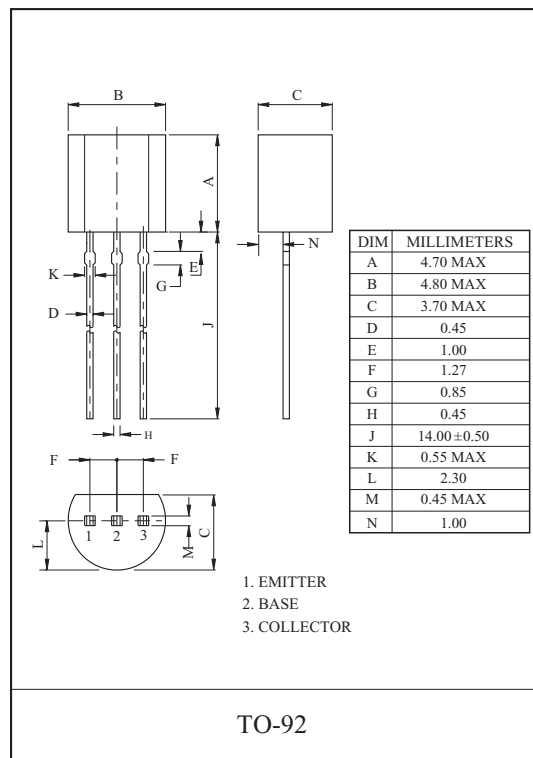
VOLTAGE REGULATOR, RELAY,
LAMP DRIVER, INDUSTRIAL USE

FEATURES

- High Voltage : $V_{CEO}=60V(\text{Min.})$.
- High Current : $I_C(\text{Max.})=1A$.
- High Transition Frequency : $f_T=150\text{MHz}(\text{Typ.})$.
- Wide Area of Safe Operation.
- Complementary to MPS751.

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	80	V
Collector-Emitter Voltage		V_{CEO}	60	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	1	A
	Pulse	I_{CP}	2	
Collector Power Dissipation		P_C	625	mW
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ\text{C}$

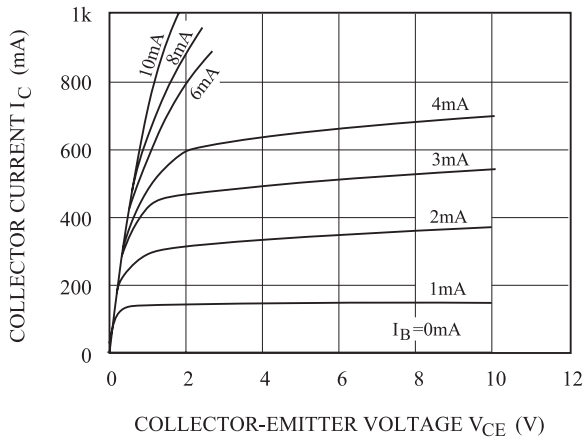


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

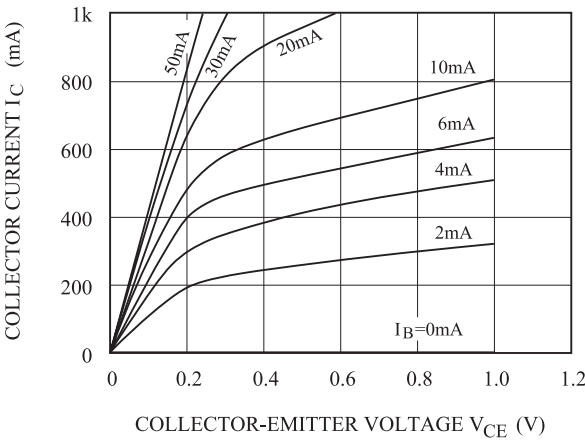
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=4V, I_C=0$	-	-	100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=50\text{mA}$	100	-	320	
	$h_{FE(2)}$	$V_{CE}=2V, I_C=1A$	30	-	-	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	60	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	0.15	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	0.85	1.2	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=50\text{mA}$	-	150	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	-	12	-	pF

Note : $h_{FE(1)}$ Classification Y:100 ~ 200 , GR:160 ~ 320

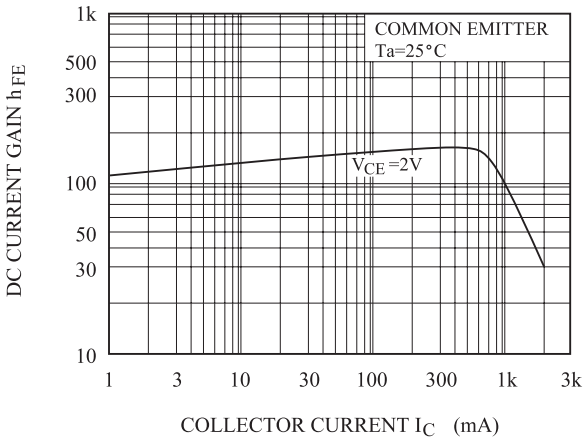
$I_C - V_{CE}$



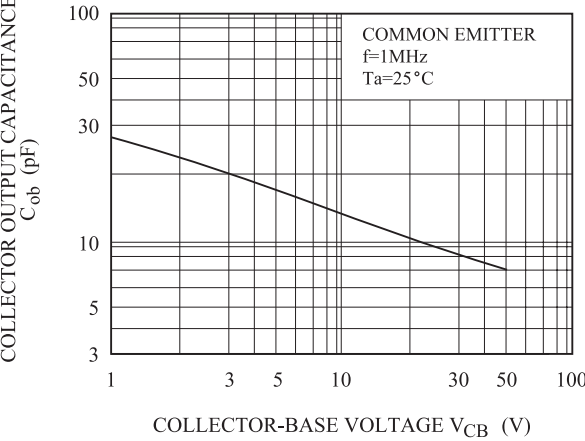
$I_C - V_{CE}$



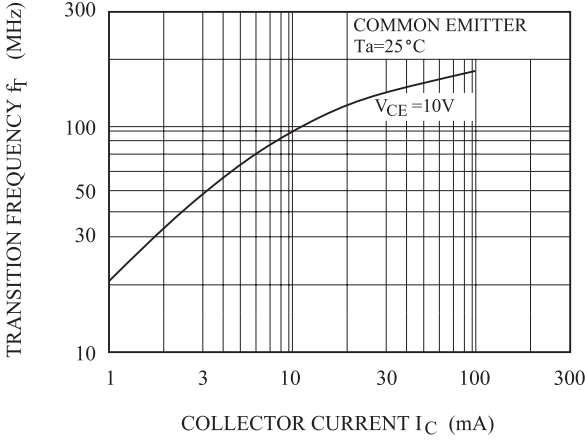
$h_{FE} - I_C$



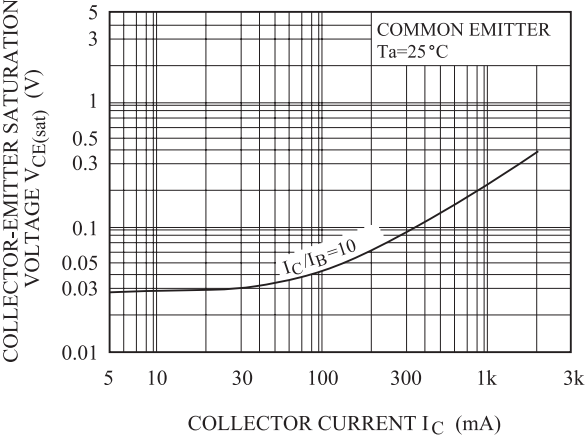
$C_{ob} - V_{CB}$



$f_T - I_C$

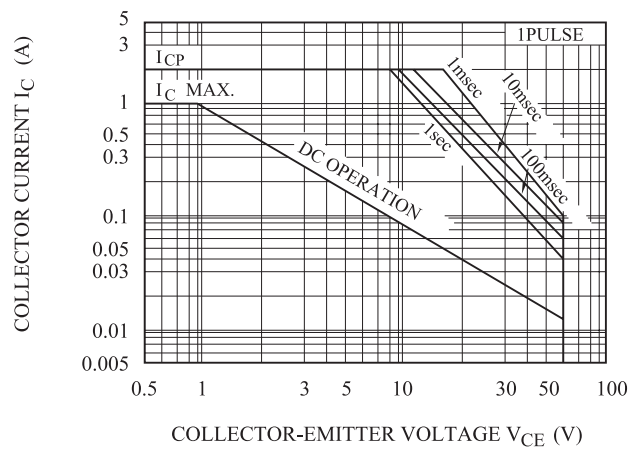


$V_{CE(sat)} - I_C$



MPS651

SAFE OPERATING AREA



$P_C - T_a$

