

#### Absolute maximum ratings

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

Symbol	Ratings	Unit
$V_{CB0}$	120	V
$V_{CE0}$	100	V
$V_{EBO}$	6	V
$I_C$	2	A
$I_{CP}$	4 ( $PW \leq 1\text{ms}$ , $D_u \leq 50\%$ )	A
$I_B$	0.2	A
$I_F$	2 ( $PW \leq 0.5\text{ms}$ , $D_u \leq 25\%$ )	A
$I_{FSM}$	4 ( $PW \leq 10\text{ms}$ , Single pulse)	A
$V_R$	120	V
$P_T$	4 ( $T_a=25^\circ\text{C}$ ) 20 ( $T_c=25^\circ\text{C}$ )	W
$T_j$	150	$^\circ\text{C}$
$T_{stg}$	-40 to +150	$^\circ\text{C}$

#### Electrical characteristics

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

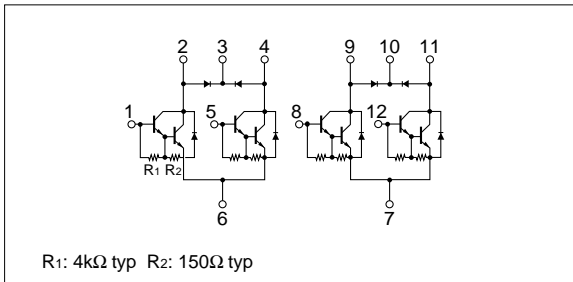
Symbol	Specification			Unit	Conditions
	min	typ	max		
$I_{CBO}$			10	$\mu\text{A}$	$V_{CB}=120\text{V}$
$I_{EBO}$			10	mA	$V_{EB}=6\text{V}$
$V_{CE0}$	100			V	$I_C=25\text{mA}$
$h_{FE}$	2000	6000	15000		$V_{CE}=4\text{V}$ , $I_C=1\text{A}$
$V_{CE(sat)}$		1.1	1.5	V	$I_C=1\text{A}$ , $I_B=2\text{mA}$
$V_{BE(sat)}$		1.7	2.0	V	

#### Diode for flyback voltage absorption

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

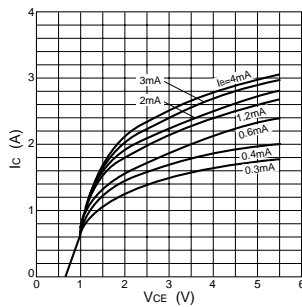
Symbol	Specification			Unit	Conditions
	min	typ	max		
$V_R$	120			V	$I_R=10\mu\text{A}$
$V_F$			1.8	V	$I_F=1\text{A}$
$I_R$			10	$\mu\text{A}$	$V_R=120\text{V}$
$t_{rr}$		100		ns	$I_F=\pm 100\text{mA}$

#### Equivalent circuit diagram

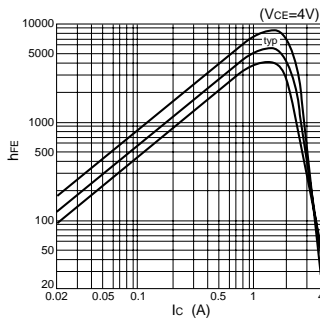


#### Characteristic curves

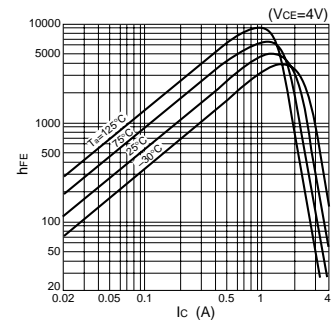
$I_C$ - $V_{CE}$  Characteristics (Typical)



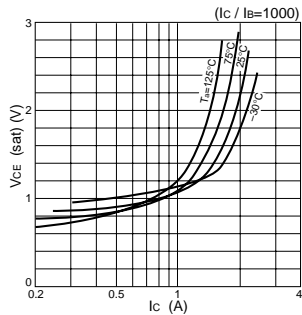
$h_{FE}$ - $I_C$  Characteristics (Typical)



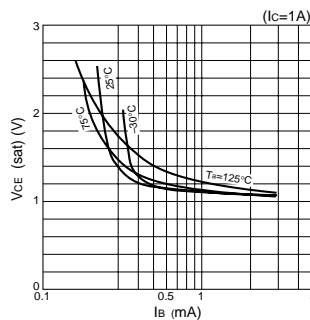
$h_{FE}$ - $I_C$  Temperature Characteristics (Typical)



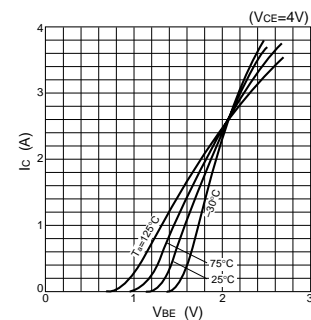
$V_{CE(sat)}$ - $I_C$  Temperature Characteristics (Typical)



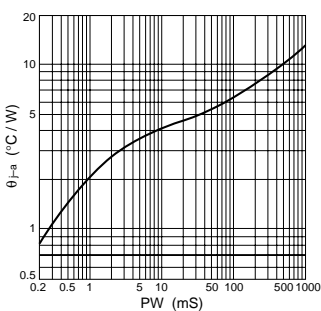
$V_{CE(sat)}$ - $I_B$  Characteristics (Typical)



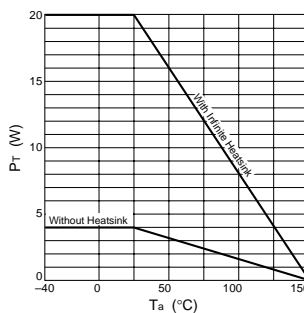
$I_C$ - $V_{BE}$  Temperature Characteristics (Typical)



$\theta_{j-a}$ - $PW$  Characteristics



$P_T$ - $T_a$  Characteristics



Safe Operating Area (SOA)

