

#### Absolute maximum ratings

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

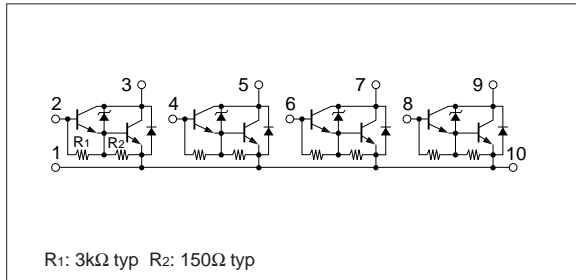
Symbol	Ratings	Unit
$V_{CB0}$	$60\pm 10$	V
$V_{CE0}$	$60\pm 10$	V
$V_{EB0}$	6	V
$I_c$	6	A
$I_B$	1	A
$P_T$	4 ( $T_a=25^\circ\text{C}$ )	W
	20 ( $T_c=25^\circ\text{C}$ )	
$T_j$	150	$^\circ\text{C}$
$T_{stg}$	-40 to +150	$^\circ\text{C}$

#### Electrical characteristics

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

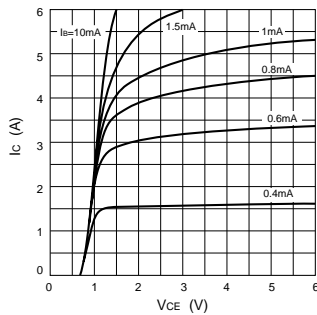
Symbol	Specification			Unit	Conditions
	min	typ	max		
$I_{CBO}$			10	$\mu\text{A}$	$V_{CB}=50\text{V}$
$I_{EBO}$			10	mA	$V_{EB}=6\text{V}$
$V_{CE0}$	50	60	70	V	$I_c=50\text{mA}$
$h_{FE}$	2000		15000		$V_{CE}=2\text{V}, I_c=3\text{A}$
$V_{CE(sat)}$			1.5	V	$I_c=3\text{A}, I_B=10\text{mA}$
$V_{BE(sat)}$			2.0	V	
$E_{S/B}$	200			mJ	$V_{CC}=20\text{V}, L=10\text{mH}, I_c=6.4\text{A}$

#### Equivalent circuit diagram

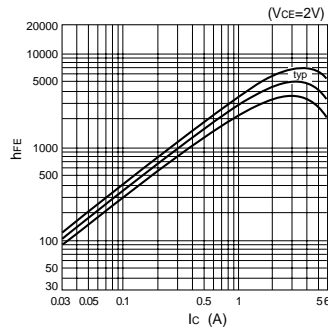


#### Characteristic curves

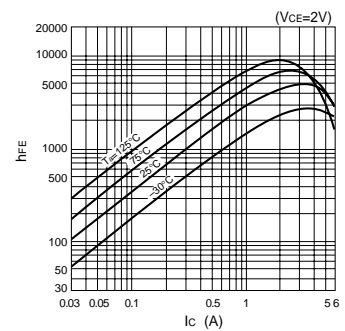
$I_c$ - $V_{CE}$  Characteristics (Typical)



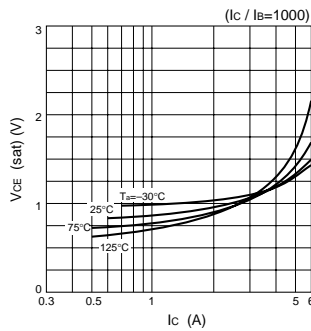
$h_{FE}$ - $I_c$  Characteristics (Typical)



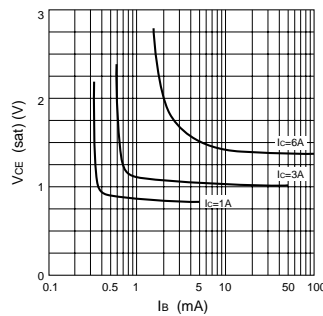
$h_{FE}$ - $I_c$  Temperature Characteristics (Typical)



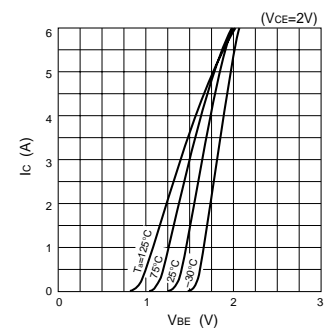
$V_{CE(sat)}$ - $I_c$  Temperature Characteristics (Typical)



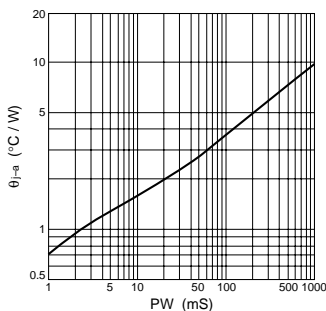
$V_{CE(sat)}$ - $I_B$  Characteristics (Typical)



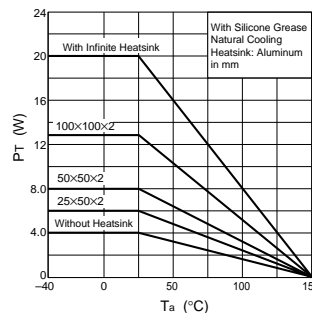
$I_c$ - $V_{BE}$  Temperature Characteristics (Typical)



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



$P_T$ - $T_a$  Characteristics



Safe Operating Area (SOA)

