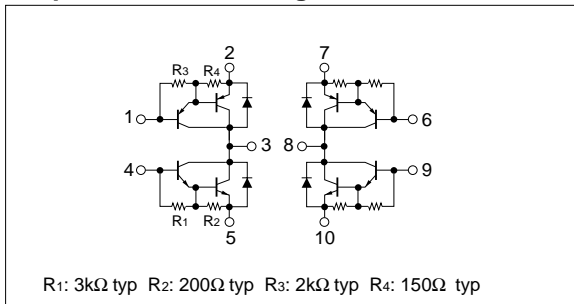


## Absolute maximum ratings

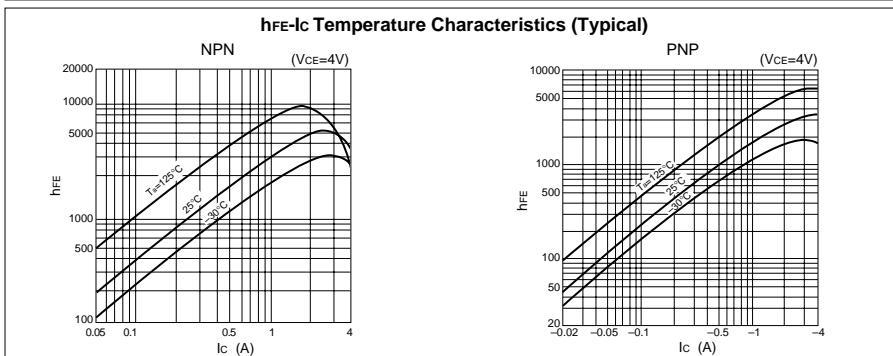
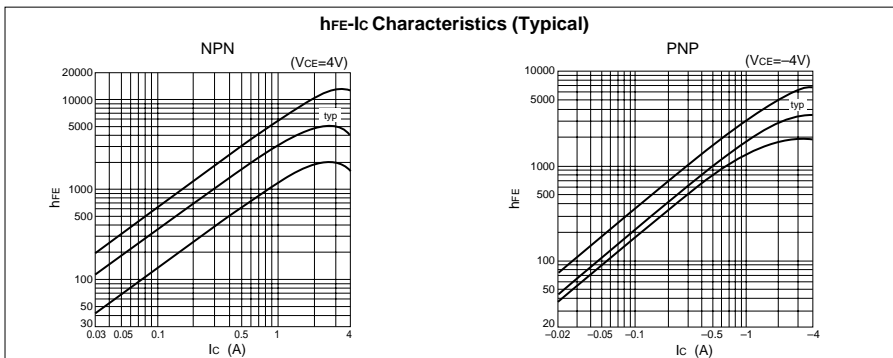
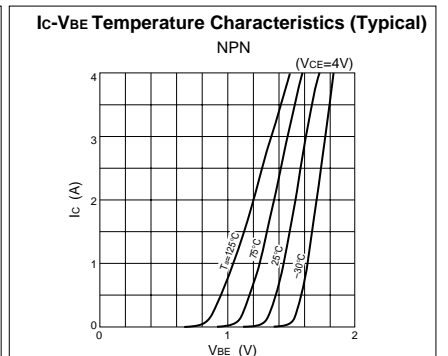
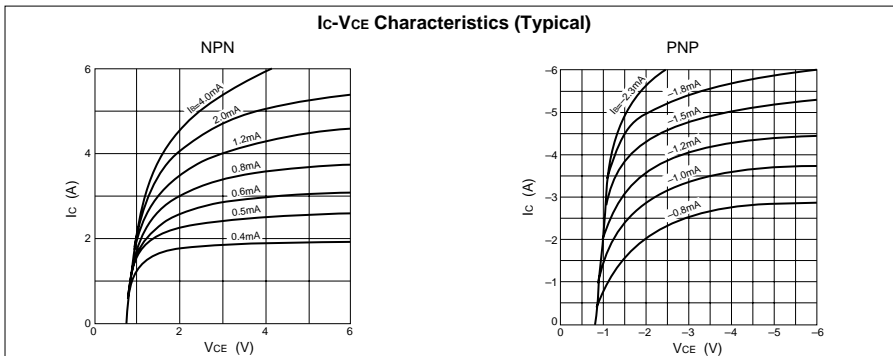
( $T_a=25^\circ\text{C}$ )

Symbol	Ratings		Unit
	NPN	PNP	
$V_{CBO}$	60	-60	V
$V_{CEO}$	60	-60	V
$V_{EBO}$	6	-6	V
$I_c$	4	-4	A
$I_{CP}$	8 ( $PW \leq 10\text{ms}$ , $D_u \leq 50\%$ )	-8 ( $PW \leq 10\text{ms}$ , $D_u \leq 50\%$ )	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		$^\circ\text{C}$

## Equivalent circuit diagram



## Characteristic curves



## Electrical characteristics

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

Symbol	NPN					PNP				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
$I_{CBO}$			10	$\mu\text{A}$	$V_{CB}=60\text{V}$			-10	$\mu\text{A}$	$V_{CB}=-60\text{V}$
$I_{EBO}$			10	$\text{mA}$	$V_{EB}=6\text{V}$			-10	$\text{mA}$	$V_{EB}=-6\text{V}$
$V_{CEO}$	60			$\text{V}$	$I_C=10\text{mA}$	-60			$\text{V}$	$I_C=-10\text{mA}$
$h_{FE}$	2000				$V_{CE}=4\text{V}, I_C=2\text{A}$	2000				$V_{CE}=-4\text{V}, I_C=-2\text{A}$
$V_{CE}(\text{sat})$			1.5	$\text{V}$	$I_C=2\text{A}, I_B=4\text{mA}$			-1.5	$\text{V}$	$I_C=-2\text{A}, I_B=-4\text{mA}$
$V_{BE}(\text{sat})$			2.0	$\text{V}$				-2.0	$\text{V}$	
$V_{FEC}$			1.6	$\text{V}$	$I_{FEC}=2\text{A}$			-1.6	$\text{V}$	$I_{FEC}=-2\text{A}$

## Characteristic curves

