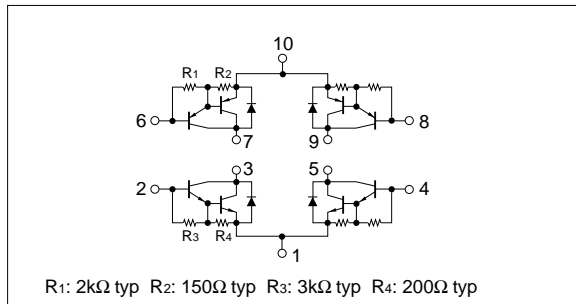


## Absolute maximum ratings

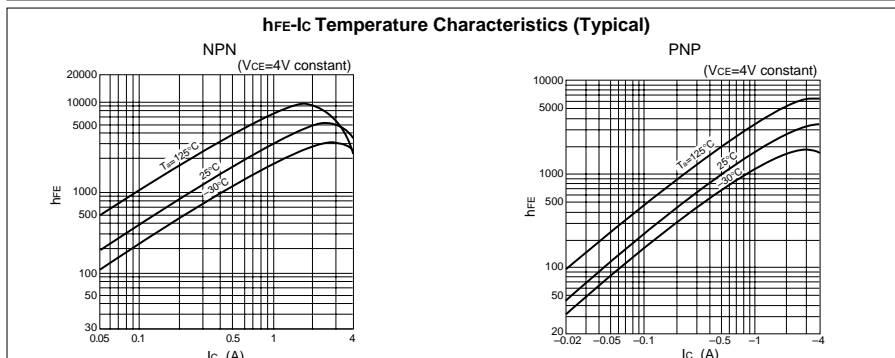
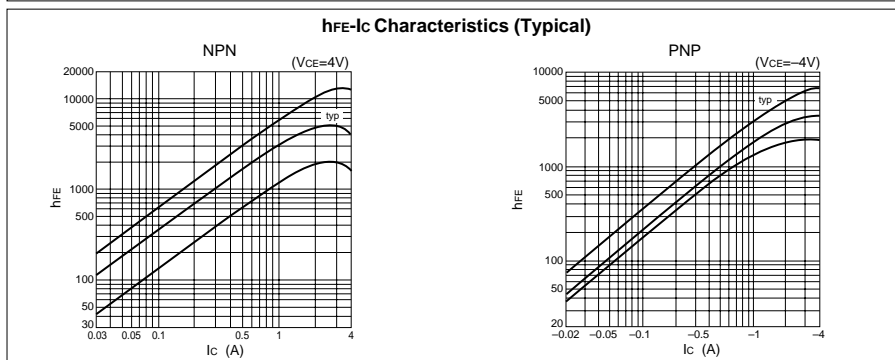
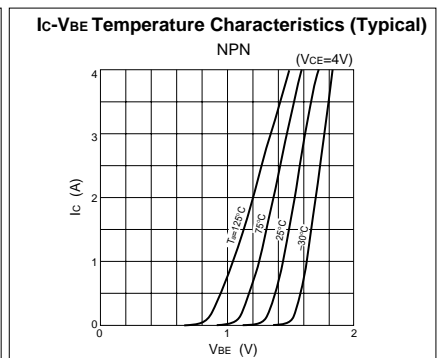
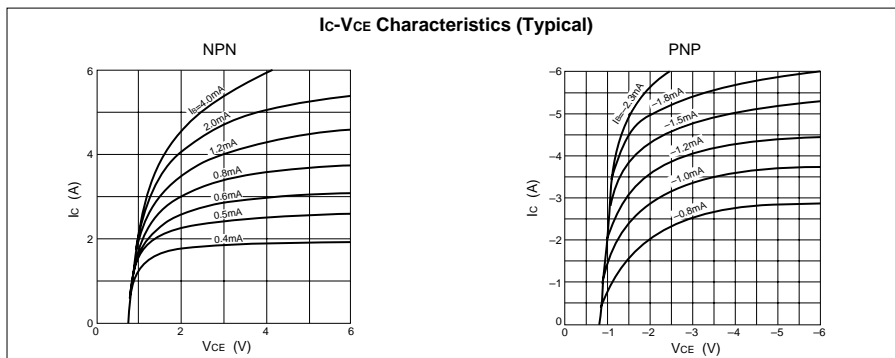
( $T_a=25^\circ\text{C}$ )

Symbol	Ratings		Unit
	NPN	PNP	
$V_{CBO}$	80	-60	V
$V_{CEO}$	60	-60	V
$V_{EBO}$	6	-6	V
$I_C$	4	-4	A
$I_{CP}$	8 (PW $\leq$ 10ms, Du $\leq$ 50%)	-8 (PW $\leq$ 10ms, Du $\leq$ 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		
$I_{CBO}$			100	$\mu\text{A}$	$V_{CB}=80\text{V}$			-100	$\mu\text{A}$	$V_{CB}=-60\text{V}$
$I_{EBO}$			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	$\text{V}$	$I_C=-10\text{mA}$
$h_{FE}$	1000				$V_{CE}=4\text{V}, I_C=3\text{A}$			1000		$V_{CE}=-4\text{V}, I_C=-3\text{A}$
$V_{CE(sat)}$			2.0	$\text{V}$	$I_C=3\text{A}, I_B=10\text{mA}$			-2.0	$\text{V}$	$I_C=-2\text{A}, I_B=-10\text{mA}$
$t_{on}$		1.0		$\mu\text{s}$	$V_{CC}\doteq 30\text{V},$ $I_C=3\text{A},$ $I_{B1}=-I_{B2}=10\text{mA}$		0.4		$\mu\text{s}$	$V_{CC}\doteq -30\text{V},$ $I_C=-3\text{A},$ $I_{B1}=-I_{B2}=-10\text{mA}$
$t_{stg}$		4.0		$\mu\text{s}$			0.8		$\mu\text{s}$	
$t_f$		1.5		$\mu\text{s}$			0.6		$\mu\text{s}$	

## Characteristic curves

