

Silicon PNP Darlington Power Transistor

MJH11017

ELECTRICAL CHARACTERISTICS

$T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -100\text{mA}, I_B = 0$	-150			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}, I_B = -0.1\text{A}$			-2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}, I_B = -0.15\text{A}$			-4.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -15\text{A}, I_B = -0.15\text{A}$			-3.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -10\text{A}; V_{CE} = -5\text{V}$			-2.8	V
I_{CEV}	Collector Cutoff Current	$V_{CEV}=150\text{V}; V_{BE(off)}=1.5\text{V}$ $V_{CEV}=150\text{V}; V_{BE(off)}=1.5\text{V}; T_c=150^\circ\text{C}$			-0.5 -5.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -75\text{V}, I_B = 0$			-1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}, I_C = 0$			-2	mA
h_{FE-1}	DC Current Gain	$I_C = -10\text{A}; V_{CE} = -5\text{V}$	400		15000	
h_{FE-2}	DC Current Gain	$I_C = -15\text{A}; V_{CE} = -5\text{V}$	100			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}, f = 0.1\text{MHz}$			600	pF

Switching times

t_d	Delay Time	$I_C = -10\text{A}, V_{CC} = -100\text{V};$ $I_B = -0.1\text{A}; V_{BE(off)} = -5\text{V};$ Duty Cycle $\leq 2.0\%$		75		ns
t_r	Rise Time			0.5		μs
t_s	Storage Time			2.7		μs
t_f	Fall Time			2.5		μs