

**DESCRIPTION AND FEATURES**

- \*Collector-Emitter voltage:  $BV_{CBO}=40V$
- \*Collector current up to 3A
- \*High  $h_{FE}$  linearity

**PIN CONFIGURATIONS**

PIN	SYMBOL
1	Emitter
2	Collector
3	Base

**ABSOLUTE MAXIMUM RATINGS** ( $T_{amb}=25^{\circ}C$ )

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$BV_{CBO}$	40	V
Collector-Emitter Voltage	$BV_{CEO}$	30	V
Emitter-Base Voltage	$BV_{EBO}$	5	V
Collector Dissipation	$T_{case}=25^{\circ}C$	10	W
	$T_{amb}=25^{\circ}C$	1	W
Collector Current	DC	3	A
	Pulse	7	A
Base Current	$I_B$	0.6	A
Junction Temperature	$T_j$	+150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^{\circ}C$

**ELECTRICAL CHARACTERISTICS** ( $T_{amb}=25^{\circ}C$ , all voltage referenced to GND Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			100	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=3V, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2V, I_C=20mA$	30	200		
	$h_{FE2}$	$V_{CE}=2V, I_C=1A$	100		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$		0.3	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2A, I_B=0.2A$		1.0	2.0	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=5V, I_C=0.1A$		80		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		45		pF

**CLASSIFICATION OF  $h_{FE}$**

RANK	Q	P	E
RANGE	100~200	160~320	200~400