Si NPN TRANSISTOR—D2012

DESCRIPTION AND FEATURES

*Collector-Emitter voltage: BV_{CBO}= 60V

*Collector current up to 3A

*High h_{FE} linearity

PIN CONFIGURATIONS

PIN	SYMBOL
1	Emitter
2	Collector
3	Base

ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

PARAMETER		SYMBOL	VALUE	UNIT
Collector-Base Voltage		BV_{CBO}	60	V
Collector-Emitter Voltage		BV_{CEO}	50	V
Emitter-Base Voltage		BV_{EBO}	7	V
Collector Dissipation	Tcase=25℃	P_{CM}	30	W
	Tamb=25℃		1.5	W
Collector Current	DC	I_{CM}	3	A
	Pulse	Icp	7	A
Base Current		I_B	0.6	A
Junction Temperature		Tj	+150	℃
Storage Temperature		Tstg	-55～+150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃,all voltage referenced to GND Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	V_{CB}=50V, I_E=0			100	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=20mA	30	200		
	$h_{FE}2$	V_{CE}=5V, I_C=0.5A	100		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=3A, I_B=0.3A		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		5		MHz
Output Capacitance	Cob	V_{CB}=10V, I_E=0,f=1MHz		80		pF

CLASSIFICATION OF h_{FE}

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

WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China

Tel: 86-510-5205117 86-510-5205108 Fax: 86-510-5205110 Website: www.e-youda.com

SHENZHEN OFFICE Tel： 86-755-83740369 13823533350 Fax： 86-755-83741418