



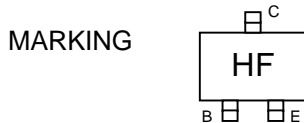
Shanghai Lunsure Electronic  
Technology Co.,Ltd  
Tel:0086-21-37185008  
Fax:0086-21-57152769

# MMBT1815

## NPN EPITAXIAL SILICON TRANSISTOR

### Features

- Collector-Emitter voltage:  $V_{CE0}=50V$
- Collector current up to 150mA
- High hFE linearity
- Complimentary to MMBT1015



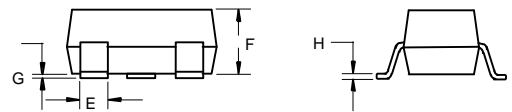
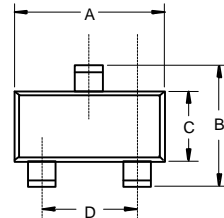
### Maximum Ratings

- Junction Temperature: 125°C
- Storage Temperature: -55°C to +150°C

ABSOLUTE MAXIMUM RATINGS  $T_a = 25^\circ C$  Unless Otherwise Specified

PARAMETERS	SYMBOL	VALUE	UNIT
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector dissipation	$P_C$	200	mW
Collector current	$I_C$	150	mA
Base Current	$I_B$	50	mA
Junction Temperature	$T_J$	125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

### SOT-23



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.106	.122	2.70	3.10	
B	.093	.108	2.35	2.75	
C	.067	.083	1.70	2.10	
D	.047	.059	1.20	1.50	
E	.014	.022	0.35	0.55	
F	.041	.053	1.05	1.35	
G	-----	.004	-----	.10	
H	.003	.008	.08	.20	

# MMBT1815



## ELECTRICAL CHARACTERISTICS Ta= 25°C Unless Otherwise Specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	IcBO	Vcb=60V, Ie=0			100	nA
Emitter cut-off current	IeBO	Veb=5V, Ic=0			100	nA
DC current gain(note)	hFE1	Vce=6V, Ic=2mA	130		400	
Collector-emitter saturation voltage	Vce(sat)	Ic=100mA, Ib=10mA		0.1	0.25	V
Base-emitter saturation voltage	Vbe(sat)	Ic=100mA, Ib=10mA			1.0	V
Current gain bandwidth product	fT	Vce=10V, Ic=1.0mA, f=30Hz	80			MHz
Output capacitance	Cob	Vcb=10V, Ie=0, f=1MHz		2.0	3.0	pF
Noise Figure	NF	Ic=-0.1mA, Vce=6V Rg=10kΩ, f=100Hz		1.0	1.0	dB

## CLASSIFICATION OF hFE1

RANK	L	H
RANGE	130-200	200-400

## TYPICAL CHARACTERISTIC CURVES

