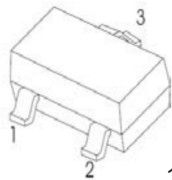




FEATURES

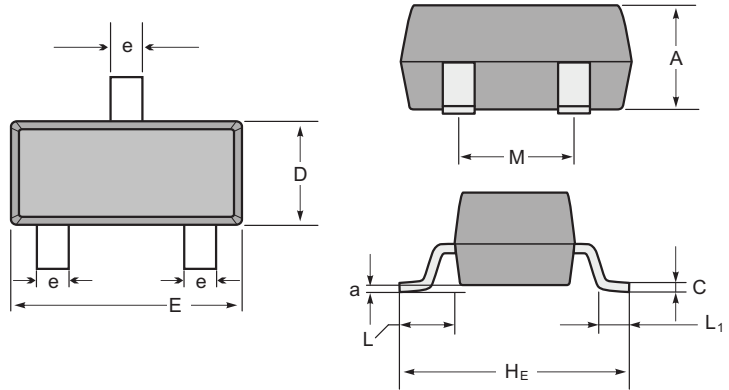
- Complementary to S9015



1. BASE
2. EMITTER
3. COLLECTOR

Marking

Type number	Marking code
S9015	M6



SOT-23 mechanical data

UNIT		A	C	D	E	HE	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	V_{CEO}	-45	Vdc
Collector–Base Voltage	V_{CBO}	-50	Vdc
Emitter–Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current — Continuous	I_c	-100	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	P_D	200	mW
Junction and Storage Temperature	T_J, T_{stg}	- 55 to +150	$^\circ\text{C}$

CLASSIFICATION OF h_{FE}

Rank	L	H
Range	200-450	400-1000

S9015

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.) OFF CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Collector–Emitter Breakdown Voltage(3) ($I_C = -0.1 \text{ mA}_{dc}$, $I_B = 0$)	$V_{(BR)CEO}$	-45	—	Vdc
Collector–Base Breakdown Voltage ($I_C = -100 \mu\text{A}_{dc}$, $I_E = 0$)	$V_{(BR)CBO}$	-50	—	Vdc
Emitter–Base Breakdown Voltage ($I_E = -100 \mu\text{A}_{dc}$, $I_C = 0$)	$V_{(BR)EBO}$	-5.0	—	Vdc
Collector cut-off current ($V_{CB} = -50 \text{ V}_{dc}$, $I_E = 0$)	I_{CBO}	—	-0.1	μA_{dc}
Emitter cut-off current ($V_{EB} = -5 \text{ V}_{dc}$, $I_C = 0$)	I_{EBO}	—	-0.1	μA_{dc}

- FR-5 = 1.0 x 0.75 x 0.062 in.
- Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.
- Pulse Test: Pulse Width <300 μs , Duty Cycle <2.0%.

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted) (Continued) ON CHARACTERISTICS (3)

Characteristic	Symbol	Min	Max	Unit
DC Current Gain	h_{FE}			—
($I_C = -1.0 \text{ mA}_{dc}$, $V_{CE} = -5 \text{ V}_{dc}$)		200	1000	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$			Vdc
($I_C = -100 \text{ mA}_{dc}$, $I_B = -10 \text{ mA}_{dc}$)(3)		—	-0.3	
Base–Emitter Saturation Voltage(3)	$V_{BE(sat)}$			Vdc
($I_C = -100 \text{ mA}_{dc}$, $I_B = -10 \text{ mA}_{dc}$)		—	-1.0	

SMALL–SIGNAL CHARACTERISTICS

Current–Gain — Bandwidth Product ($I_C = -10 \text{ mA}_{dc}$, $V_{CE} = -5.0 \text{ V}_{dc}$, $f = 30 \text{ MHz}$)	f_T	150	—	MHz
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RATING AND CHARACTERISTIC CURVES (S9015)

