



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

## SOT-523 Plastic-Encapsulate Transistors

### **2SC4738** TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$P_{CM}$ : 0.1 W ( $T_{amb}=25^{\circ}C$ )

Collector current

$I_{CM}$ : 0.15 A

Collector-base voltage

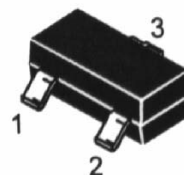
$V_{(BR)CBO}$ : 60 V

Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$

#### SOT-523

1. BASE
2. EMITTER
3. COLLECTOR



#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

| Parameter                            | Symbol        | Test conditions             | MIN | TYP | MAX  | UNIT    |
|--------------------------------------|---------------|-----------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$       | 60  |     |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$            | 50  |     |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=100\mu A, I_C=0$       | 5   |     |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60V, I_E=0$         |     |     | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5V, I_C=0$          |     |     | 0.1  | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE}=6V, I_C=2mA$        | 120 |     | 700  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=100mA, I_B=10mA$       |     |     | 0.25 | V       |
| Transition frequency                 | $f_T$         | $V_{CE}=10V, I_C=1mA$       | 80  |     |      | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$ |     |     | 3.5  | pF      |

#### CLASSIFICATION OF $h_{FE(1)}$

| Rank    | Y       | GR      | BL      |
|---------|---------|---------|---------|
| Range   | 120-240 | 200-400 | 350-700 |
| Marking | LY      | LG      | LL      |

# Typical Characteristics

2SC4738

