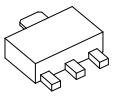
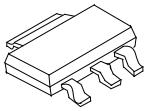
USS4350

NPN SILICON TRANSISTOR

50V, 5A NPN LOW $V_{CE(SAT)}$ TRANSISTOR



SOT-89



SOT-223

■ DESCRIPTION

The **UTC USS4350** is a low $V_{CE\ (SAT)}$ NPN transistor designed for applications, such as: DC/DC converter, supply line switching, battery charger, linear voltage regulation, driver in low supply voltage applications and inductive load driver.

■ FEATURES

* Collector-emitter saturation voltage:50V
* High collector current gain (h_{FE}) under high I_C conditions
* High collector current capability
* Higher efficiency resulting in less heat generation
* Complementary to UTC USS5350
* Halogen Free

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Haiogen Free		1	2	3	
USS4350L-AA3-R	USS4350G-AA3-R	SOT-223	B	C	E	Tape Reel
USS4350L-AB3-R	USS4350G-AB3-R	SOT-89	B	C	E	Tape Reel

USS4350G-AA3-R

(1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) AA3: SOT-223, AB3: SOT-89
(3)Halogen Free	(3) G: Halogen Free, L: Lead Free

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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	50	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	3	A
	Peak	I_{CM}	5	A
Peak Base Current		I_{BM}	1	A
Power Dissipation (T_C=25°C) (Note 2)	SOT-89	P_D	1.4	W
	SOT-223		2	
Junction Temperature		T_J	150	°C
Operating Temperature		T_{OPR}	-65 ~ +150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. Device mounted on a printed-circuit board; single sided copper; tinplated; mounting pad for collector 6 cm^2

■ THERMAL DATA

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Junction to Ambient (Note)	SOT-89	θ_{JA}			90	°C/W
	SOT-223				62.5	

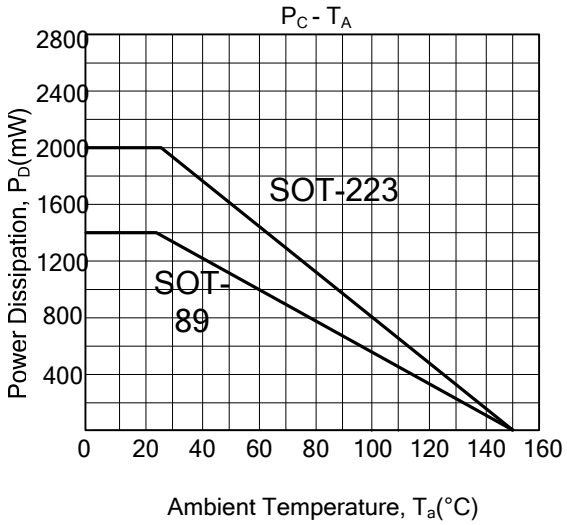
Note: Device mounted on a printed-circuit board; single sided copper; tinplated; mounting pad for collector 6 cm^2

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=50 V, I_E=0			100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5 V, I_C=0			100	nA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=500 mA, I_B=50 mA			90	mV
		I_C=1 A, I_B=50 mA			170	mV
		I_C=2 A, I_B=200 mA (Note)			290	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=2 A, I_B=200 mA (Note)			1.2	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	V_{CE}=2V; I_C = 1 A (Note)			1.1	V
DC Current Gain	h_{FE1}	V_{CE}=2V, I_C=500 mA	200			
	h_{FE2}	V_{CE}=2V, I_C=1 A (Note)	200			
	h_{FE3}	V_{CE}=2V, I_C=2 A (Note)	100			
Equivalent On-Resistance	$R_{CE(SAT)}$	I_C=2 A, I_B=200 mA (Note)		110	<145	mΩ
Transition Frequency	f_T	I_C=100 mA, V_{CE}=5 V, f=100 MHz	100			MHz
Collector Capacitance	C_C	V_{CB}=10 V; I_E=I_e = 0; f =1 MHz			30	pF

Note: Pulse test: t_P ≤300 μs; Duty cycle≤2%

■ TYPICAL CHARACTERISTICE



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