

MCH6534 — NPN Epitaxial Planar Silicon Transistor

Switching, Driver Applications

Applications

- Low-frequency power amplifier, high-speed switching motor drivers, muting

Features

- Composite type with 2 NPN transistors contained in a single package, facilitating high-density mounting
- Ultrasmall package permitting applied sets to be small and slim
- Small ON-resistance (Ron)

Specifications

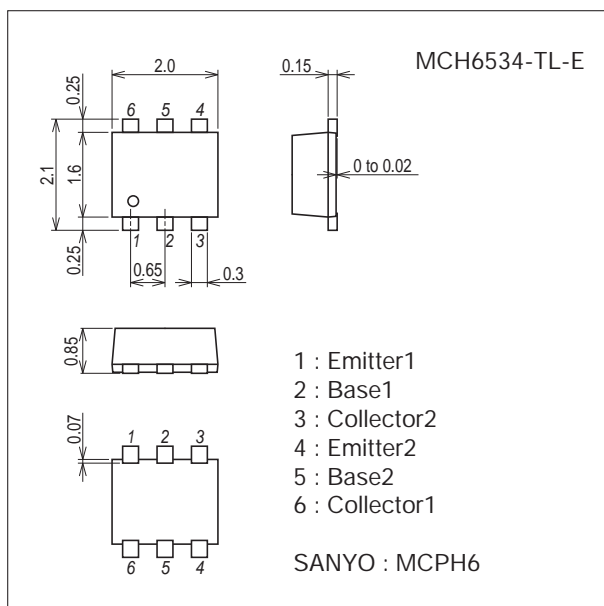
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		20	V
Collector-to-Emitter Voltage	V _{CEO}		15	V
Emitter-to-Base Voltage	V _{EBO}		5	V
Collector Current	I _C		700	mA
Collector Current (Pulse)	I _{CP}		1.4	A
Collector Dissipation	P _C	When mounted on ceramic substrate (600mm ² ×0.8mm)	0.5	W
Total Power Dissipation	P _T	When mounted on ceramic substrate (600mm ² ×0.8mm)	0.55	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions

unit : mm (typ)

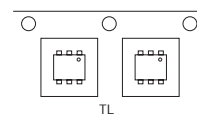
7022A-011



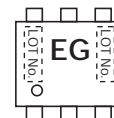
Product & Package Information

- Package : MCPH6
- JEITA, JEDEC : SC-88, SC-70-6, SOT-363
- Minimum Packing Quantity : 3,000 pcs./reel

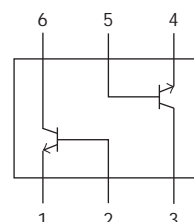
Packing Type : TL



Marking



Electrical Connection

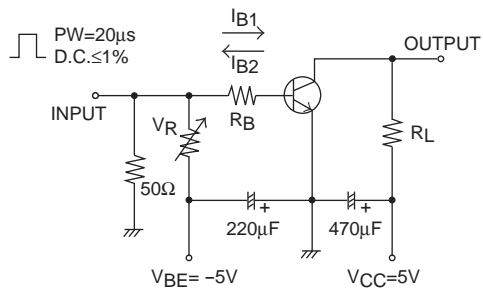


MCH6534

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=15\text{V}, I_E=0\text{A}$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0\text{A}$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=2\text{V}, I_C=10\text{mA}$	300		800	
Gain-Bandwidth Product	f_T	$V_{CE}=2\text{V}, I_C=50\text{mA}$		330		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		3.2		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200\text{mA}, I_B=10\text{mA}$		150	300	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=200\text{mA}, I_B=10\text{mA}$		0.9	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0\text{A}$	20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0\text{A}$	5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		30		ns
Storage Time	t_{stg}			77		ns
Fall Time	t_f			40		ns

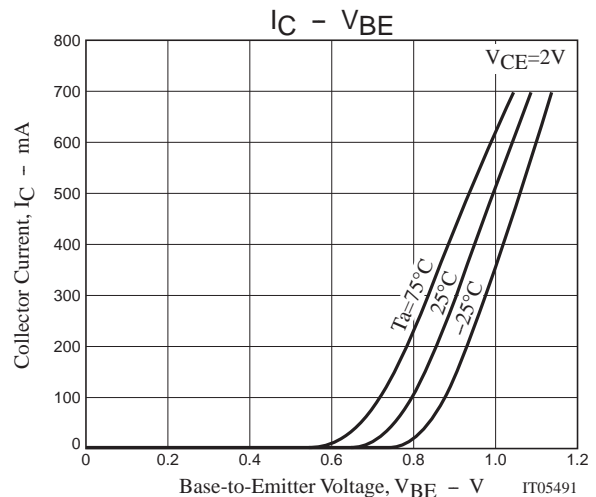
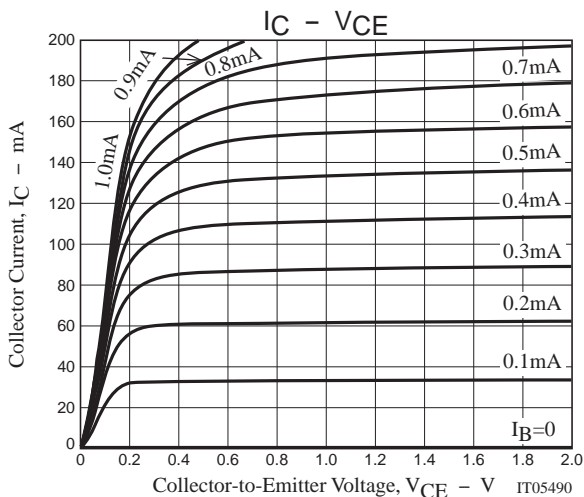
Switching Time Test Circuit

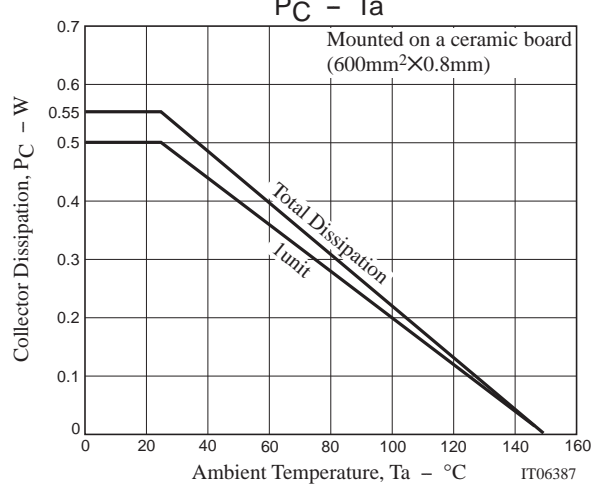
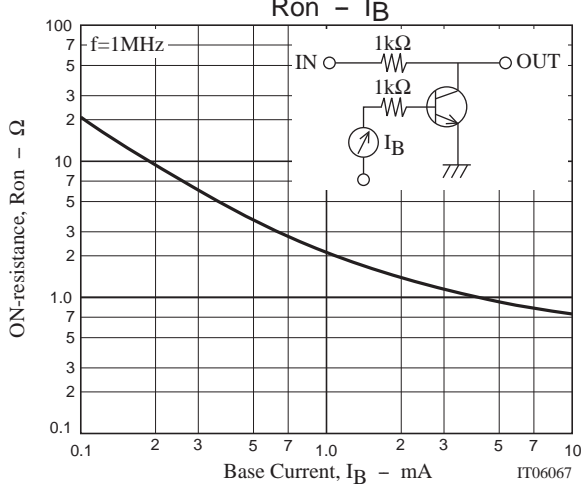
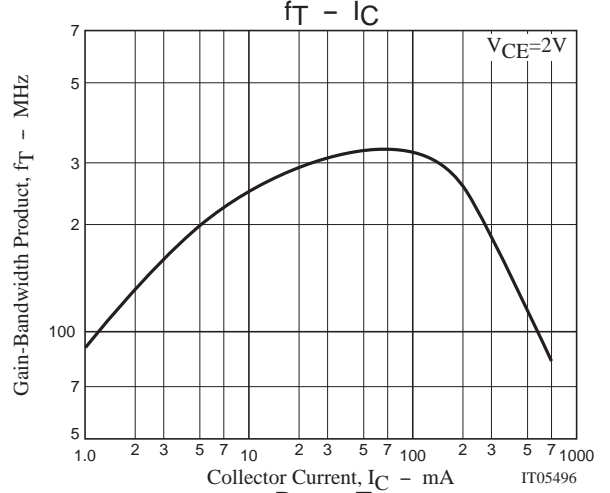
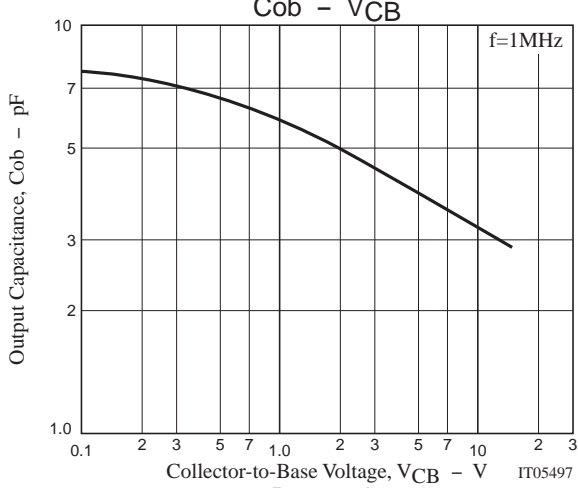
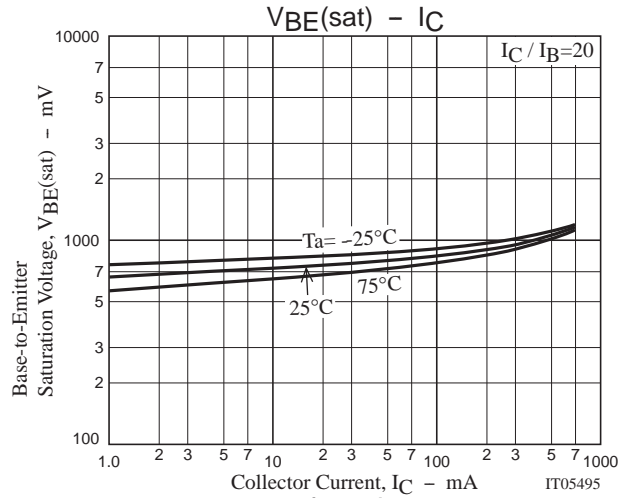
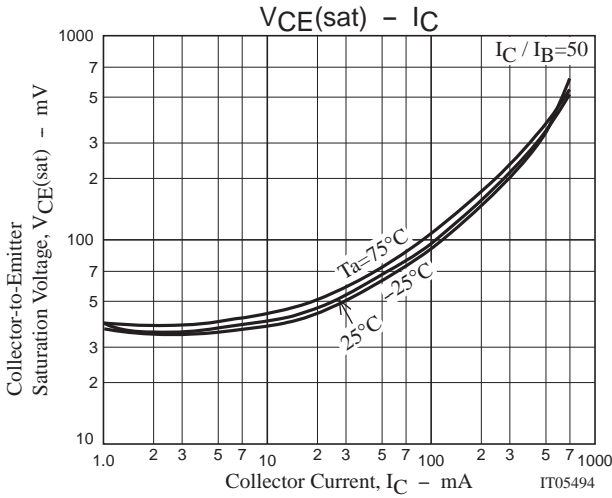
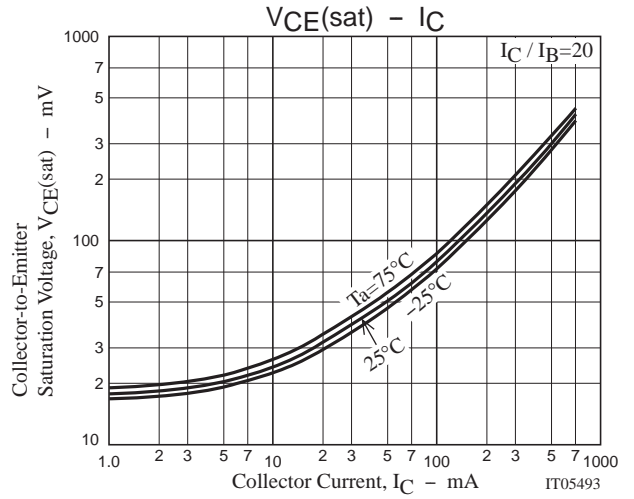
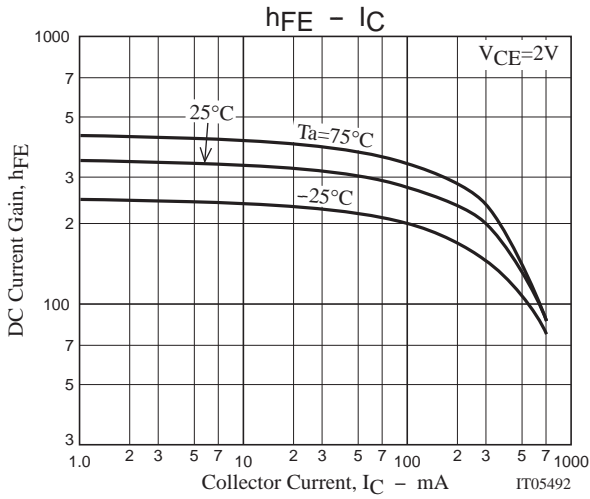


$$I_C = 20I_{B1} = -20I_{B2} = 500\text{mA}$$

Ordering Information

Device	Package	Shipping	memo
MCH6534-TL-E	MCPH6	3,000pcs./reel	Pb Free





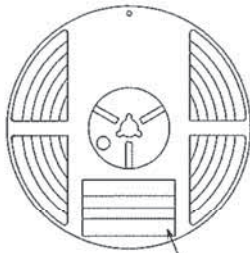
Embossed Taping Specification

MCH6534-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCPH6	MCP4	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

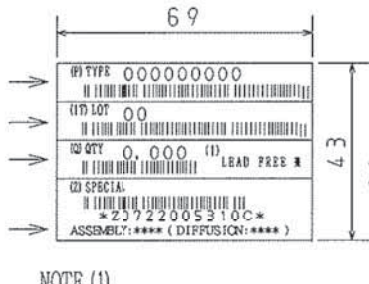
Packing method



Type No.
LOT No.
Quantity
Origin

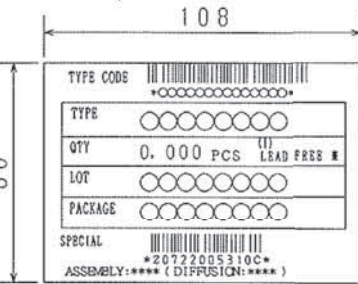
Reel label

Reel label, Inner box label
(unit:mm)



Outer box label

(It is a label at the time of factory shipments. The form of a label may change in physical distribution process.)



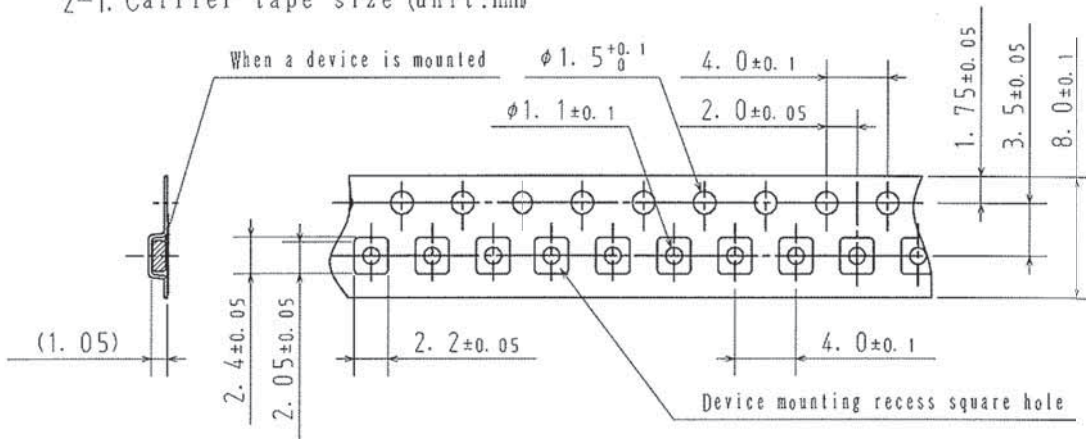
NOTE (1)

The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

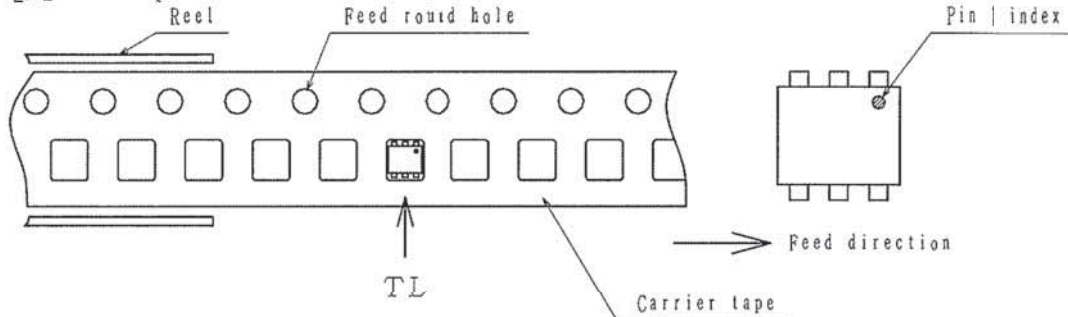
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction



Those with pin | index on the feed hole side.....TL

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