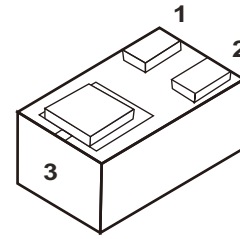


CMS3134KQA-HF

N-Channel
RoHS Device
Halogen Free



Features

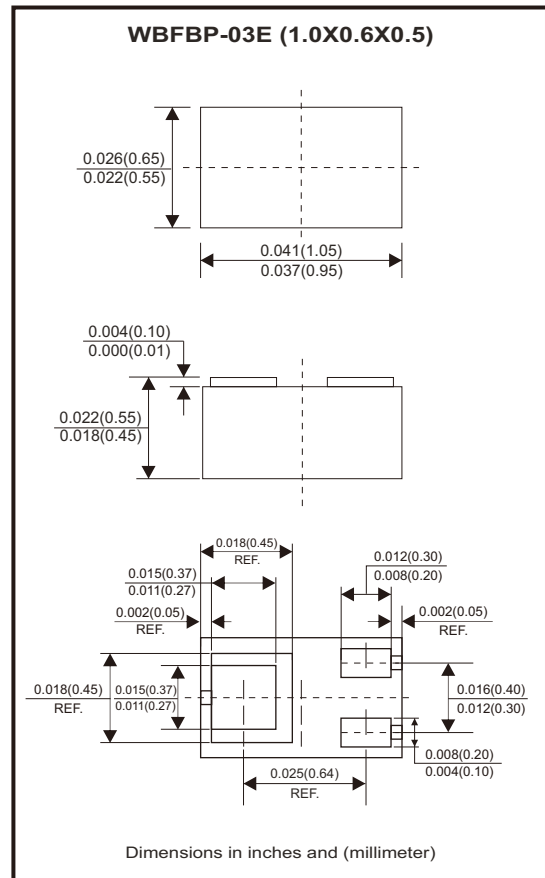
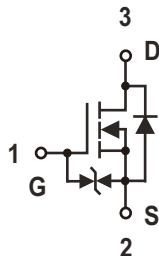
- Surface mount package.
- N-Channel switch with low $R_{DS(on)}$.
- Operated at low logic level gate drive.
- Complementary to CMS3139KQA-HF.

Mechanical data

- Case: WBFBP-03E, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram

- 1. G : Gate
- 2. S : Source
- 3. D : Drain



Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DS}	20	V
Typical Gate-Source voltage	V_{GS}	± 12	V
Continuous drain current (Note 1)	I_D	0.75	A
Pulsed drain current ($t_p=10\mu\text{s}$)	I_{DM}	1.80	A
Power dissipation (Note 2)	P_D	100	mW
Thermal resistance from junction to ambient (Note 1)	$R_{\theta JA}$	1250	$^\circ\text{C/W}$
Junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$
Lead temperature for soldering purposes(1/8" from case for 10 s)	T_L	260	$^\circ\text{C}$

Electrical Characteristics (at Ta=25 °C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR) DSS}	V _{GS} = 0V , I _D = 250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 20V , V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V , V _{DS} = 0V			±20	μA
Gate threshold voltage (Note 2)	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.35		1.1	V
Drain-source on-resistance (Note 2)	R _{DS(on)}	V _{GS} = 4.5V , I _D = 0.65A			380	mΩ
		V _{GS} = 2.5V , I _D = 0.55A			450	
		V _{GS} = 1.8V , I _D = 0.45A			800	
Forward transconductance (Note 2)	g _{FS}	V _{DS} = 10V , I _D = 0.8A		1.6		S
Diode forward voltage	V _{SD}	I _S = 0.15A , V _{GS} = 0V			1.2	V
Dynamic Characteristics (Note 4)						
Input capacitance	C _{iss}	V _{DS} = 16V , V _{GS} = 0V , f = 1MHz		79	120	pF
Output capacitance	C _{oss}			13	20	
Reverse transfer capacitance	C _{rss}			9	15	
Switching Characteristics (Note 4)						
Turn-on delay time (Note 3)	t _{d(on)}	V _{GS} = 4.5V , V _{DS} = 10V I _D = 500mA , R _{GEN} = 10Ω		6.7		nS
Turn-on rise time (Note 3)	t _r			4.8		
Turn-off delay time (Note 3)	t _{d(off)}			17.3		
Turn-off fall time (Note 3)	t _f			7.4		

- Notes:**
1. Surface mounted on FR4 board using the minimum recommended pad size.
 2. Pulse test: Pulse width = 300 μs , duty cycle $\leq 2\%$
 3. Switching characteristics are independent of operating junction temperatures.
 4. Granted by design, not subject to producing.

RATING AND CHARACTERISTIC CURVES (CMS3134KQA-HF)

Fig.1 - Output Characteristics

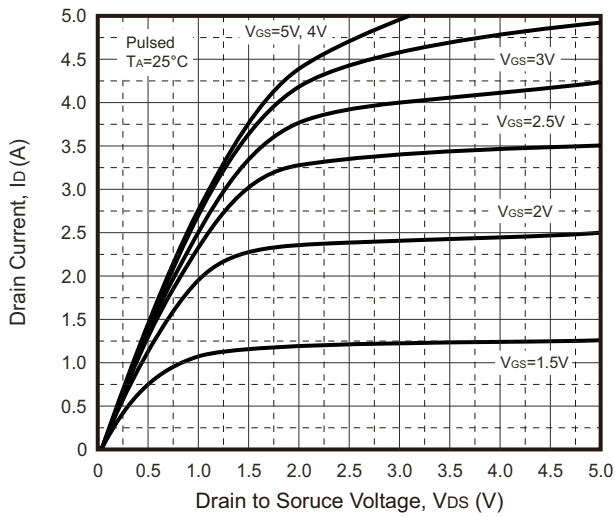


Fig.2 - Transfer Characteristics

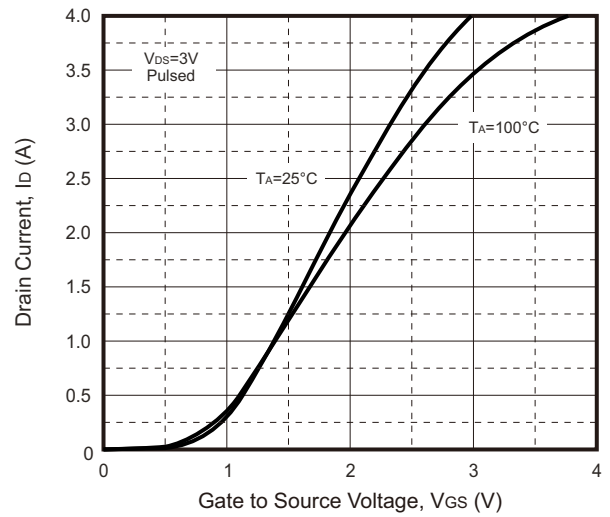


Fig.3 - $R_{DS(ON)}$ — I_D

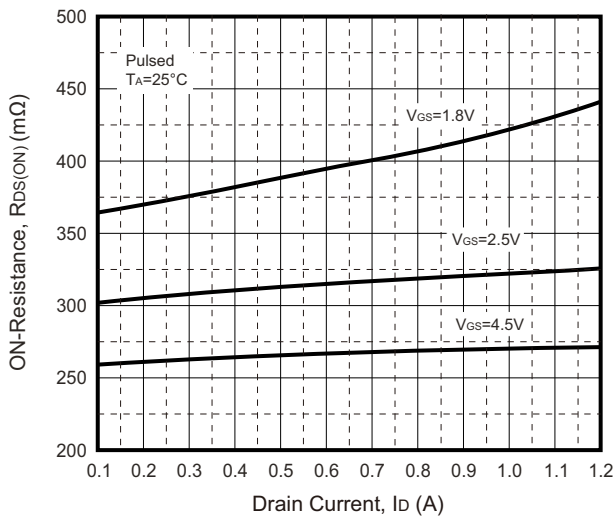


Fig.4 - $R_{DS(ON)}$ — V_{GS}

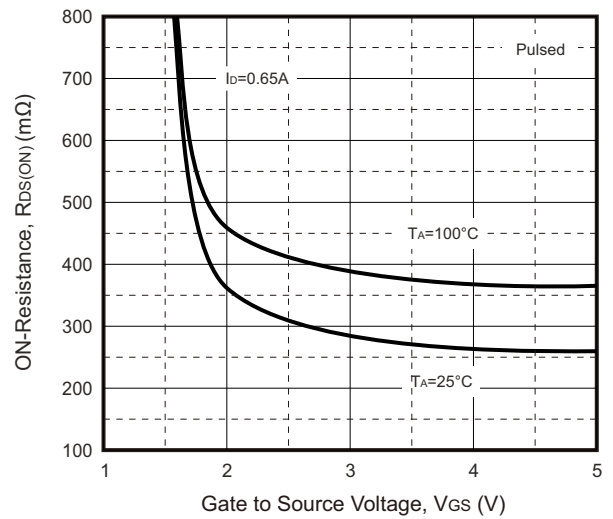


Fig.5 - I_S — V_{SD}

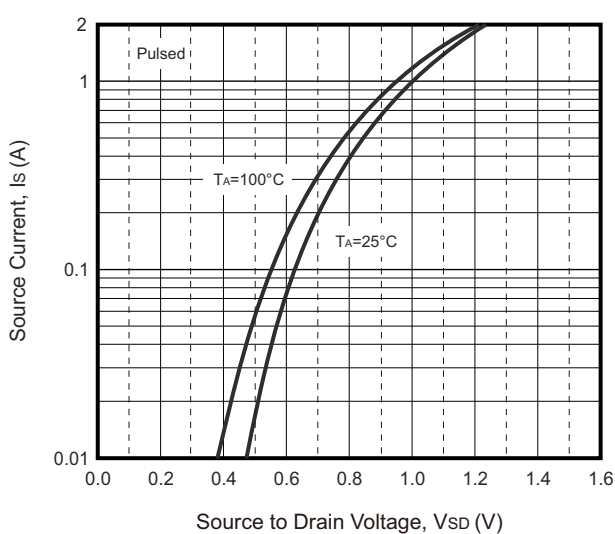
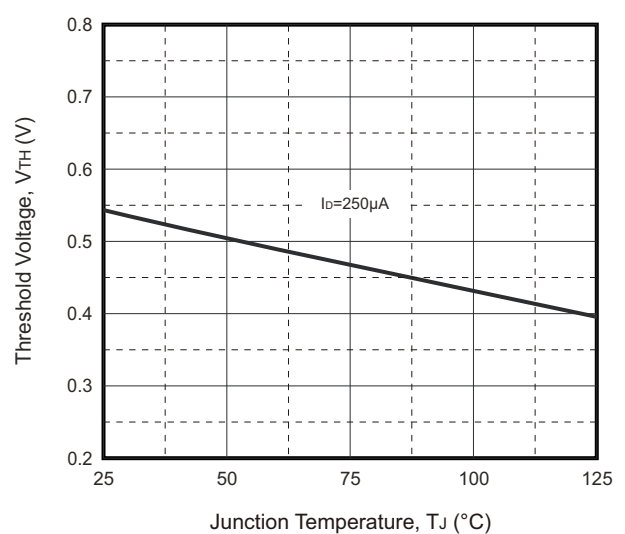
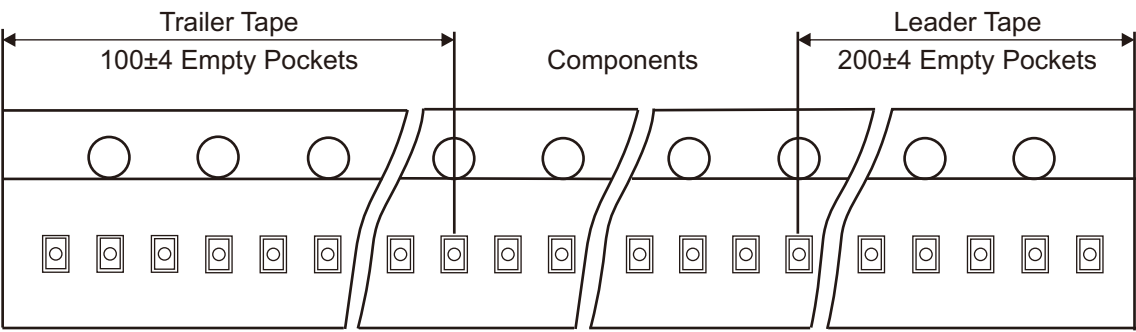
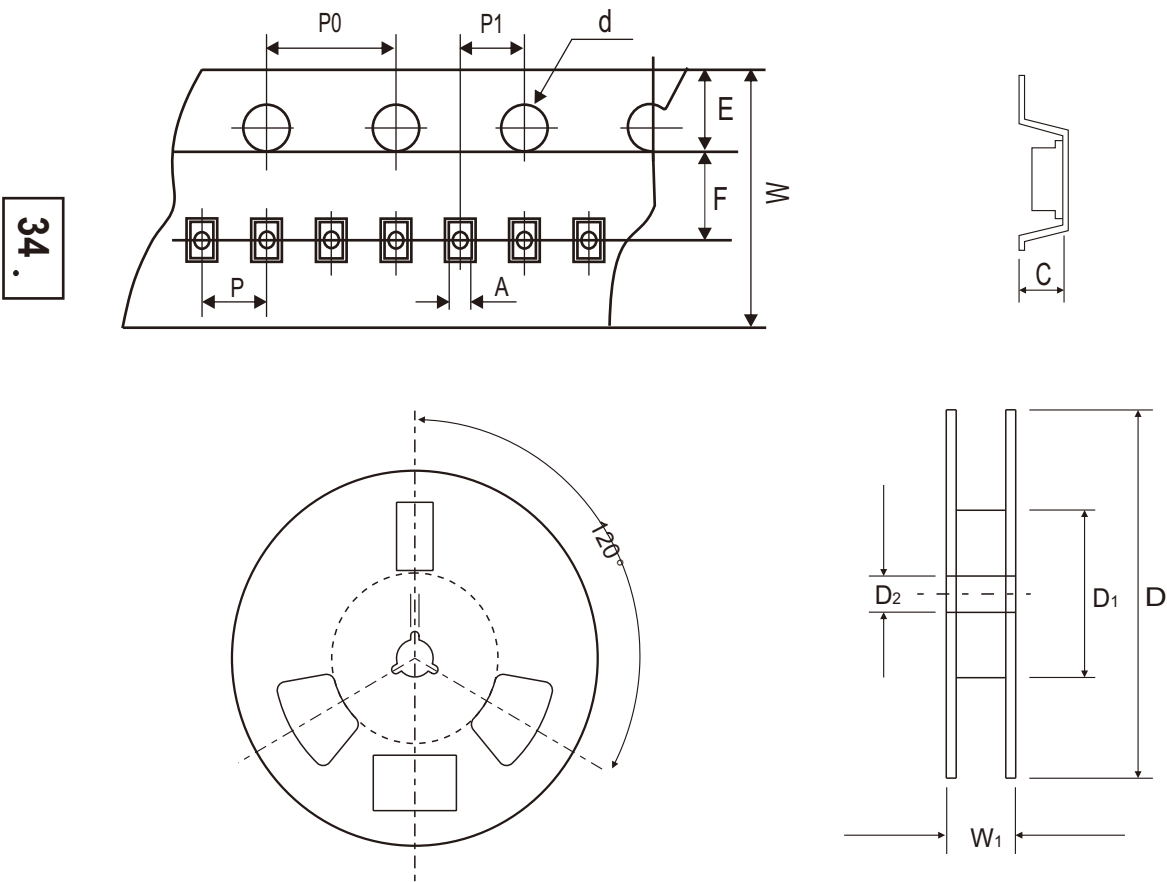


Fig.6 - Threshold Voltage



Reel Taping Specification



WBFBP-03E (1.0X0.6X0.5)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.66 ± 0.05	1.15 ± 0.05	0.66 ± 0.05	1.50 + 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.026 ± 0.002	0.045 ± 0.002	0.026 ± 0.002	0.059 + 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

WBFBP-03E (1.0X0.6X0.5)	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.05	2.00 ± 0.05	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.002	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

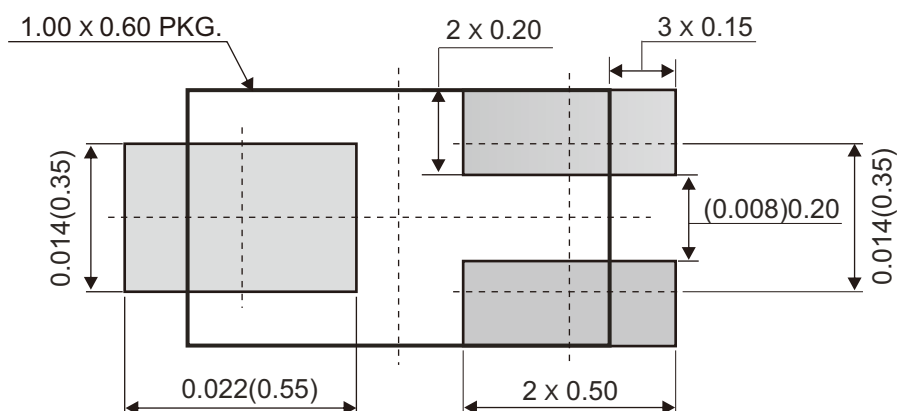
Part Number	Marking Code
CMS3134KQA-HF	34 .

34.

34 = Device code

Solid dot = Pin 1 indicator

Suggested P.C.B. PAD Layout



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
WBFBP-03E	10,000	7