

产品简介

1200 V RC-E 逆导型 IGBT

用于感应加热的经济高效的 IGBT

此类用于感应加热的谐振拓扑结构对功率元器件有着特殊要求。它们需要 18 kHz 到 40 kHz 开关频率范围内性能最好的 IGBT，以低损耗满足能效标准，同时价格极具竞争力。然而，不同于电机驱动应用，感应加热不需要硬开关，短路能力或特殊封装类型。

新型 RC-E IGBT 基于由来已久的 RC-H 专用技术。它们专为高性价比电磁炉和其他谐振应用作了成本和性能优化。RC-E 技术使用有单片集成反并联二极管的 IGBT，为行业的性价比和易用性设定了新的基准。新系列提供的英飞凌 RC IGBT 质量可靠，可满足所有软开关应用的需求，包括相对于其他通用 IGBT 来说更具吸引力的价格。

主要特性

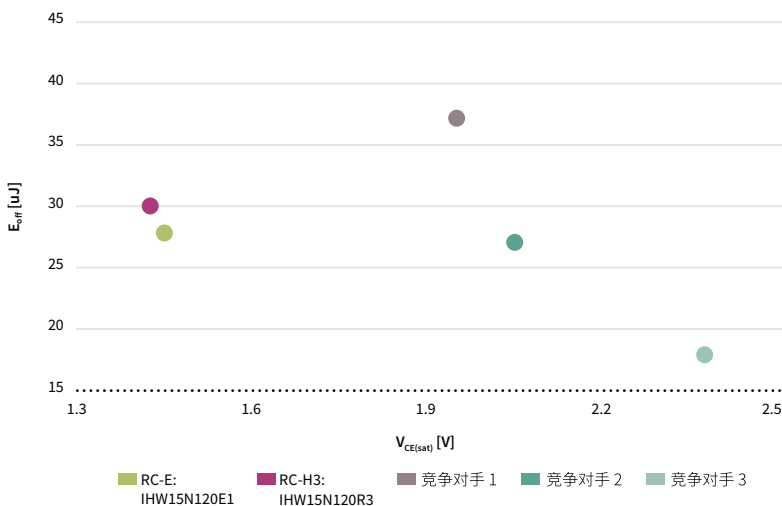
- › 低关断损耗和 $V_{ce(sat)}$
- › 专为软开关应用设计
- › 对 18 kHz 到 40 kHz 的开关频率范围进行性能优化
- › 最常用的击穿电压，1200 V

主要优势

- › 特别适用于高性价比设计
- › 低损耗，有助于达到能效标准
- › 直接替换现有设计
- › 软开关，具有良好的 EMI 特性

软开关 - 为感应加热而优化

$I_c = 15 \text{ A}$, $T_c = 25^\circ\text{C}$, $R_G = 10 \Omega$, $V_{GE} = 18 \text{ V}$



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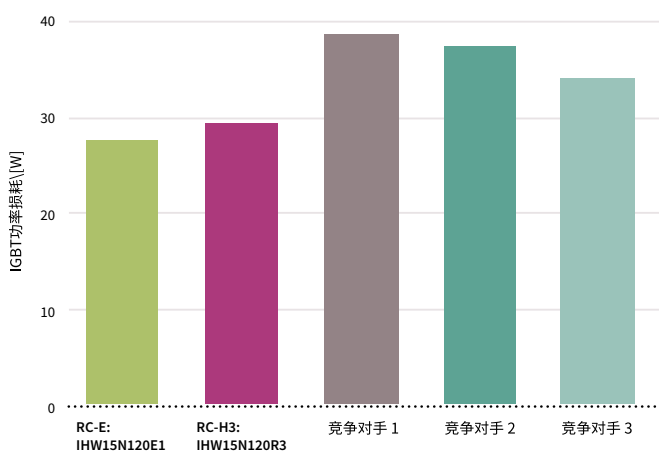
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RC-E 系列的主要亮点

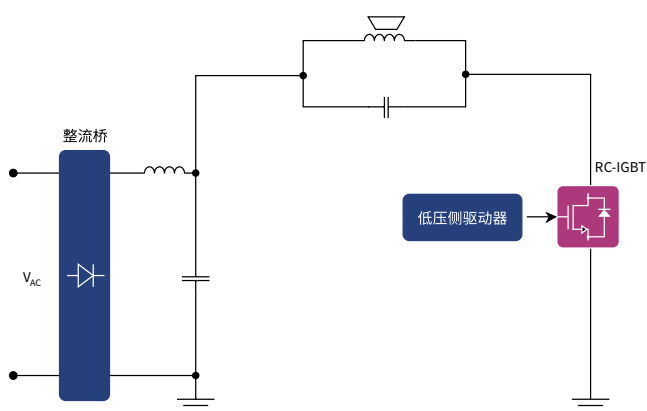
- › 类似于英飞凌的 RC-H3 系列, 开关和导通损耗低
- › 基于世界上最好的分立 IGBT 系列 RC-H 中使用的技术
- › 标准 TO-247 封装, 易于替换现有设计

IGBT 功率损耗 – IHW15N120E1 和竞争对手

输出功率 = 2.1 kW, $T_c = 25^\circ\text{C}$



感应加热 (电压谐振)



RC-E 产品系列关键参数

| 型号 | 100°C 下的额定电流 [A] | V_{br} [V] | $V_{CE(sat)}$ [V] | E_{off} [mJ] | V_f [V] | I_f at 100°C [A] |
|-------------|------------------|--------------|-------------------|----------------|-----------|--------------------|
| IHW15N120E1 | 15 | 1200 | 1.50 | 0.03 | 1.90 | 15 |
| IHW25N120E1 | 25 | 1200 | 1.50 | 0.08 | 1.90 | 25 |

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